

The

August, 1928

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THE YOUTH'S COMPANION

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VIRGINIA'S BANDIT

The Long Story Complete in This Issue

By *Elsie Singmaster*

ILLUSTRATED BY D. S. WENDELL

WERGIE!" Walking through the dining-room, Virginia stopped short, as if commanded by an imperative voice. She turned a bit awkwardly, as if she could not easily manage her tall frame. She was sixteen years old and growing rapidly—her father told her, "an inch a day." Her eyes were blue; her hair, which she had not cut, was brown. Her general appearance was slightly old-fashioned, and her expression was that of one to whom speech is difficult. She had graduated in June from the Gettysburg High School, and in September she expected to enter Gettysburg College.

Now she was smiling, and her face was illuminated. What she had heard was not a voice calling her; it was the telephone bell. It was practically a voice, however, for at the other end of the line was undoubtedly Mrs. Newhard, and "Wergie" was what Mrs. Newhard would say. She was a Pennsylvania German who still retained many Pennsylvania German idioms and pronunciations. With her inordinate curiosity she was a nuisance to all her neighbors. Large, somewhat crippled by rheumatism and seldom able to leave home, she depended upon the telephone for all her entertainment.

Virginia decided that Mrs. Newhard must wait. Her mother and father were sitting in the car at the gate while she fetched her mother's scarf, which she now had in her hand. Mrs. McIntyre was about to take the Gettysburg-McConnellsburg bus in order to visit her sister, who was ill, and it was time for her to start. On the other hand, the message might not be from Mrs. Newhard, but from someone else, and might be important. Virginia lifted the receiver.

"Yes?"

"Wergie!"

Alas, her first thought had been best!

"How is it by you this nice afternoon?"

Virginia could see in imagination Mrs. Newhard's smiling face—she knew that Mrs. Newhard had nothing whatever to say, and that she would consume an enormous time in saying it. Virginia, however, had patience with her.

"Fine."

"How's your Mom?"

"Fine."

There was a loud blast from without.

"I must go," announced Virginia. "There's someone blowing a horn at the gate. I'll call you later."

She hung up the receiver quickly. No one ever told Mrs. Newhard any details which could remain untold.

She ran through the living-room and the hall out to the front porch, and raced down the path. Her mother sat beside her father on the front seat of the car—a large woman with snapping black eyes who possessed inexhaustible physical energy and the most pronounced of principles.

Mr. McIntyre was tall and lean and blue-eyed, a Scotchman with a Scotchman's rugged features. Physically and mentally Virginia resembled him, and she had inherited his tender heart.

"Now, Virginia," began Mrs. McIntyre. Like Mrs. Newhard, Mrs. McIntyre belonged to Pennsylvania German stock, but superior intelligence and association with her Scotch husband had modified and improved her Pennsylvania German speech. "Your father will be here, your cousin Nell will be here; the only extra work is canning and preserving. You should have no trouble and a nice quiet time."

Virginia caught her father's eye; in it was a twinkle.

"Shall I do the raspberries?"

"Yes."

"And the currants?"

"If they are ripe."

"Shall I do any together?"

"Yes."

"Shall I use the cold-pack method for canned raspberries?"

"Yes." With each question and answer, a furrow on Mrs. McIntyre's brow deepened. At last she leaned out and kissed her daughter once more. "If you need me, telephone

to McConnellsburg and have them send a messenger at once and at any cost."

"I will, Mother."

Mr. McIntyre put his foot on the starter. He looked at Virginia again whimsically and said "So long!" and the car moved away. "She's pretty well grown up, Mother. Five-eight and still going some."

"She's a child," declared Mrs. McIntyre. "A baby! Wouldn't you think she could decide those questions for herself?"

"She would, if you weren't about. She knows what would happen if you came home and she'd used the hot pack instead of the cold pack."

Though Mrs. McIntyre had lived with her husband for twenty years she always took his remarks literally. "There's no such thing as a hot pack," she answered impatiently. "She's an inexperienced child."

"You don't give her much chance to get experience."

"I'm going away!" said Mrs. McIntyre unhappily. "That's enough chance. I wish I weren't, and I'm going to bring Susie back here to get well as soon as she's able to come. I'll be uneasy all the time."

"Now, Mother, that's absurd!" protested her husband.



"They came with one of those metal-cutting torches" [PAGE 373]

VIRGINIA watched her parents to the turn of the road, then looked about at the scene which she loved. The farm, which covered three hundred acres, lay in a shallow depression, like a vast saucer. Through the center ran a stream, and on the rim and extending downward in several places were woods.

Mr. McIntyre had two specialties; he served a large part of Gettysburg with the finest of Jersey milk, and on the upper pastures he raised sheep. He intended to change the breed; hitherto he had raised only common stock; he was now investing in Shropshires for the sake of their wool. The spring lambs were all sold and many of the sheep also, and he was about to make a journey to Greene County to buy at least a hundred yearlings. As soon as Mrs. McIntyre returned he would start.

Virginia stood still until she saw the car disappear; then she turned back to the house. The road in each direction ran over the rim of the valley, so that for an instant any vehicle—and even a pedestrian—was clearly outlined against the sky. It was not likely that another car would come that way, except her father's on the return journey. The road was a side road, used only

by the McIntyres and those who came to see them.

After looking up at the clear summer sky, she stepped into the cool house. The hall ran straight through; on one side was the parlor and behind it the spare bedroom; on the other, a living-room and behind it the large kitchen. The McIntyres took their meals in kitchen or living-room according to the season. The parlor was not often used, the living-room with its books and papers being more cheerful. The spare room was also closed most of the time, because all the family, and the guests as well, preferred upper rooms. At present the bed was made up for Aunt Susie, who might find the stairs difficult.

Through the kitchen window could be seen the large barn, and beyond, the sheep-folds and the dairy building where the milk was sterilized and bottled. Still beyond and facing the road were two houses; in the first lived Thomas Foltz and his wife, who attended to the milk, and their son, who drove the truck into Gettysburg. The Foltzes were all efficient, but they were suspicious and grasping and very much afraid of being underpaid or ill-treated.

Foltz was also, like many cowardly men, cruel. He kept a sharp lookout for stray dogs on the pretense of protecting the sheep, and he shot the most innocent on sight. He had a powerful rifle and was an expert shot. He always hit the dog at which he aimed, but he did not always kill, and several times he had wounded a stray dog and had left him to die. For this Mr. McIntyre had threatened to dismiss him.

The house beyond was the house of the shepherd. It was at present empty, but was soon to be occupied by James Kincaid, an expert who had been in Mr. McIntyre's employ six years earlier and who was expected daily.

Virginia did not stop to look out of the window, but walked straight to the opposite side of the room where, behind a door, hung an apron. The dinner table was still uncleared, and she set to work at once.

"What does Mother think could happen to me?" she inquired aloud. "I wish something would happen!"

Instantly, as if in answer, the telephone rang.

"But not that!" said Virginia, ruefully. Making a grimace, she stepped toward the phone.

"Wergie!" said a familiar voice.

"Yes."

"I thought you'd call me!" The voice was filled with reproach.

"I was busy."

"Is your Mom there?"

"She went for a ride."

"Did your Pop take her?"

"Yes."

"Didn't they take you along?"

"No, they didn't."

"Well, well! Why didn't they take you?"

"I have a book to read."

"You'll work your brain too hard!"

"No danger!"

"I'm too going for a ride."

"I hope you'll have a good time—"

Taking advantage of a moment of silence while Mrs. Newhard searched her mind vainly for a thought, Virginia hung up the receiver.

Returning to the table, she worked rapidly and deftly, her thoughts upon the book she was reading. Her English teacher suggested to her long lists of books. This was the story of a patient Swedish farmer who through years of discouragement and effort produced a variety of wheat which was free from the blight of rust. Stories of this kind thrilled Virginia to the heart; their characters were real human beings, practical and useful, the sort which she knew. While she was reading she lived in a dream. She had no interest in sentimental romance or in adventure—the first was uninteresting, and the second was improbable.

As she finished the dishes, she heard the sound of a car and walked to the front door. Her father was at the gate; instead of driving on to the garage, he stepped out of the car and came rapidly up the walk. "Virginia, do you think you and your cousin Nell could keep house here for a few days?"

"Surely!"

"I went into the telegraph office to wire Kincaid, and while I was there a message came from the broker in Pittsburgh saying that I must go this week if I'm to have a choice of the best stock. I thought this might happen, but I said nothing because I knew Mother would either stay at home and

CONTENTS for AUGUST, 1928

Title	Author	Page
VIRGINIA'S BANDIT	ELSIE SINGMASTER	371
<i>Have you ever been left alone, for a nice, quiet time, in a house far from the neighbors?</i>		
READY, ALL—STROKE!	RUSSELL CALLOW	375
<i>America's great crew coach tells you how you can "make" a college crew</i>		
INDIRECT CURRENT	JONATHAN BROOKS	376
<i>Jimmy Byers spends an interesting and profitable vacation</i>		
MY ANSWER TO THE CHALLENGE OF THE SOUTH	RICHARD E. BYRD	378
<i>As you read this superb article, Commander Byrd will be starting on the most magnificent adventure of all</i>		
THE DERELICT	CHARLES NORDHOFF	380
<i>A thrilling instalment of the outstanding adventure story since "Treasure Island"</i>		
RADIO IN POLITICS	EARL REEVES	382
<i>Your radio set (and many million others like it) holds the answer to the coming election!</i>		
OH, YOUNG LOCHINVAR!	HOLMAN DAY	383
<i>Something funny from the movie lot—with a good strong moral, too</i>		
STUNT PROFESSORS	FRED GILMAN JOPP	385
<i>The men who risk their lives to make your movies</i>		
THE WRONG ROAD	SAMUEL A. DERIEUX	386
<i>One of the last remaining stories by a notable American author</i>		
THE DARK DAY	C. A. STEPHENS	388
<i>Another of that immortal series of life and character in New England</i>		
DEATHLESS SPLENDOR	WILLIAM E. BARTON	389
<i>The concluding chapters of a great biography</i>		

DEPARTMENTS

FACT AND COMMENT	390	THINGS WE TALK ABOUT	407
<i>Our own point of view on life and politics</i>		<i>An open forum for our friends</i>	
MISCELLANY	391	THE Y. C. LAB	408
<i>Brief bits that interest and instruct</i>		<i>The most interesting society for boys in the world</i>	
THE MARCH OF SCIENCE	393	MODERN RADIO	411
<i>Triumphs from the world's laboratories and workshops</i>		<i>Developments of importance in radio</i>	
THE NEWS OF THE AIR	395	THE G. Y. C.	412
<i>First appearance of our aeronautical review</i>		<i>Edited by Helen Ferris and a hundred thousand other girls</i>	
THIS BUSY WORLD	403	THE CHILDREN'S PAGES	416
<i>Events of the day for the busy reader</i>		<i>For the youngest members of the family</i>	
NOW YOU TELL ONE!	406		
<i>Companion readers tell their best jokes</i>			
STAMPS TO STICK	418		
<i>The old and reliable guide to collecting</i>			

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have no peace about Aunt Susie, or else go and have no peace about you. Have you talked to Nellie?"

"Not yet."

"Do that right away—no, first get ready to take me back to town."

Virginia fetched her hat and locked up the back of the house. There was no reason to lock the house; everyone was honest—even the Foltzes, who were so mean otherwise. She came out and sat on the porch, until her father was ready.

"I'd better drive," said he. "We've got to hurry."

He stepped into the car and started at a good speed. "Kincaid will be here by the middle of the week. Do you remember him?"

"Perfectly," answered Virginia. "A short man with reddish hair and a round face. When he laughed, his nose turned up, and his eyes almost disappeared."

"You'd better give him his meals till he's settled. I'll telegraph you when he's to come to Fairfield

Station to meet me. Tell Kincaid to ride Lady and bring Luce for me."

Gettysburg came into view from the top of a hill. To the right was Big Round Top, surmounted by a tall observation tower, round which circled a number of buzzards which raised their young on the rocky slopes. There were other observation towers on thickly wooded lower ground. Above the town rose towers and cupolas, highest of all that of the Seminary.

Gettysburg was not so attractive near at hand. Yesterday had been the Fourth of July, and the litter of many visitors had not been cleared up. There were still hundreds of tourists driving about the avenues and through the town. Many persons were crowding into the Harrisburg bus, and Mr. McIntyre leaped from the car with a hasty good-by and ran to get a seat.

Virginia waved to him

Foltz, like many cowardly men, was cruel

[PAGE 372]

as she turned to drive home. She thought of stopping at her uncle's and taking Nell with her, but if Nell did not arrive until dark she would have time to find out whether the hero of her book succeeded in creating his rust-proof wheat. She would, however, call Nell at once.

This she did not do. She drove into the yard and put the car away. The place had a very quiet look, and the sky seemed higher than ever. She started toward the house, but on the way she turned aside to enter the stable. Once a day she was accustomed to carry sugar to the two thoroughbred Kentucky horses, Lady and Luce, on whom her father and his shepherd rode the range, and to the work-horses as well, and this she had neglected. Opening the door leading into the entry which divided their stalls, she went in.

"Lady!" said she. "Luce! Harry! Pete!" Her voice sounded unnaturally loud to her ears, and the animals behaved strangely. Usually Luce and Lady greeted her with loud whinnying, and even the stolid farm-horses uttered little grunting sounds. Lady and Luce whinnied, but they whinnied on a higher key than usual, and uneasily.

She had a disturbing notion that some other sound had just ceased, that some living creature was here, and that it was holding its breath and waiting to see what she would do.

Entirely without fear, she approached the stalls of the Kentucky horses. One nuzzled her nose against her neck, the other tried in vain to reach her. Their sensitive hides were quivering as though they were cold.

"What's the matter with you?" she asked with playful roughness. "Old siliess, what's the matter?"

THERE answered a new sound, an agonized whimper, almost human in its quality. Following the sound with her eye, she could see at the far end of the entry a small dark huddled mass. Instantly she stepped back to the door and turned on the electric light. The mass was the body of a dog, a red setter. Examining him, she found that his foot had been crushed, apparently by a stone. She coaxed him to the rear porch and then fetched a large bottle of antiseptic liniment. As she was pouring the liquid on the foot of the suffering but patient and intelligent dog, Foltz came round the corner of the barn. He was an unattractive man, undersized as to height, but with shoulders abnormally broad.

"What do you make?" he inquired. Besides being unattractive and sometimes cruel, he was mannerless. His speech was like that of Mrs. Newhard, a sort of Pennsylvania English, to which he added American slang.

"Here's this poor dog," answered Virginia. "I guess he was after a rabbit, and a rock rolled on his foot."

"I'll say!"

Foltz stepped away at once, but in a few minutes reappeared. Looking up, Virginia saw with amazement that he carried the powerful rifle with which he shot not only strange dogs but sometimes deer.

"What are you going to do?" she asked, astonished.

"Shoot him," explained Foltz. "Get him out of the way before the yearlings come." He spoke as though Virginia were a stupid child, and he her father.

"You'll do nothing of the kind!" said she hotly. "He'll get well. He's all right. Here's his tag; he's somebody's pet."

Foltz was not one to give another person the last word. "Have it your way," said he and strolled off, his gun under his arm.

Virginia watched him—he went toward the woods. Surely he would not break the law and shoot on Sunday! She went to the stable to give the horses their treat, then to the front porch, and sat down with her book. She thought of Nellie, but only to hope vaguely that she would not appear till the book was finished. She forgot entirely that she had not invited her, and that Nell did not know of her mother's call to her sister's or of her father's call to Pittsburgh.

She was roused with a start by the ring of the telephone. It was not merely twilight, it was dark; but so intense had been her concentration that her eyes had been able to pierce the darkness. The hero had bred the rustless wheat, but he had lost his life; with tears in her half-blinded eyes she stumbled to the phone.

"Wergie!" said a familiar voice.

"Yes, Mrs. Newhard." "Well, I was riding." Through stone walls and two miles of country Virginia could see Mrs. Newhard settle in her chair.

"You were!"

"I were, and now I'm back, Wergie."

Mrs. Newhard searched her brain for something to say. "Your uncle's house is all dark."

"It is?"

"Yes, I can see from here. I believe they went off. I believe they went all afternoon, off."

"Is that so?" Virginia was disturbed—what if Nell could not come?

"Are you there yet?" said Mrs. Newhard after a pause.

"I am," said Virginia.

"But I think someone else wants the line."

"That could easy be," said Mrs. Newhard. "Good-by."

Virginia stood with the receiver in her hand. She had given her uncle's number, but there was no answer. She could hear a lifted receiver, she could hear the voice of Mrs. Newhard.

"Whoever you are, if you're calling James McIntyre, he went off after dinner, and all his family."

Virginia hung up the receiver. She did not wish to announce to Mrs. Newhard that she was alone. She looked about the kitchen. She was tired and sleepy; it was late, and she must get up at five o'clock. She knew no fear, and it would be absurd to bring Nell over at this hour. She put water where the dog could reach it, she locked the house and went upstairs to her bedroom above the spare room.

"First of all, the raspberries," she said sleepily.

She made her preparations for bed and lay down. She could see dimly under the stars the rim of low hills to the east which interposed between her and a view of Gettysburg. It would be noisy there with traffic all night long, but here it was blessedly quiet and peaceful. She closed her eyes and in a second was fast asleep.

CHAPTER TWO

"A Thousand Dollars' Reward!"

VIRGINIA woke at five o'clock on Monday morning. Having dressed, she walked through the upper floor, closing shutters so as to prevent the escape of the pleasant morning freshness. On the lower floor she opened the windows and shutters to let the morning freshness in, and when she had had her breakfast, closed them.

She was bringing from the cellar small baskets and large for the raspberries when the telephone rang. Tempted not to answer, she stood hesitating—there was no time on this busy morning to talk to Mrs. Newhard. It rang again; she put down her baskets.

"Virginia," said a voice.

"Hello!" Virginia saw stout and pleasant Nell—it was delightful to feel that she would come over in the evening.

"Busy?"

"Not so very."

"Well, I am. I have Grace's four children here."

"How does that happen?"

"We went over there yesterday and found Grace sick, worn out. So Mother stayed, and I brought the children home. They're dear children, but what they don't think of never has been thought of. Did you hear from your Aunt Susie?"

"Yes," said Virginia. "She's no worse."

"I haven't much time to talk."

"I should think not! I can hear your menagerie."

"I'll wager you can! Good-by."

Virginia slowly hung up the receiver. Nell did not suspect that she was alone. She was not alone—the Foltz family were close at hand. And she had a dog! She remembered the red setter and went out to the back porch. He was in his place on the pile of old burlap she had laid for him. He tried to stand on his foot, but did not succeed and lay down. She carried him fresh water and a plate of meat and potatoes, and he wagged his tail gratefully. In a day or two he would probably hobble off to his own home.

She heard the familiar sounds of the farm without being aware of them, though she would immediately have missed them if they had ceased. Young Foltz started away with the truck. He was a sullen boy whom she did not admire and seldom saw, but, like



The stranger lay in the limpness of complete unconsciousness. "What's the matter with you?" Virginia asked, and still received no answer

[PAGE 374]

his father, he did his work well. She could hear Foltz, senior, shouting to his horses in the field where he was cultivating corn. The clock in the kitchen struck eight; she had picked all the ripe berries.

She sterilized her jars and walked to the door and looked for the postman; she packed her berries and looked for him again; she placed the jars in boilers on the oil stove and went once more to the front door. It was nine o'clock, but still he had not come. As she returned through the house, the telephone rang.

"Yes?" said she.

"Wergie!"

"Yes?"

"Are you folks so busy that you can't answer the phone?" Mrs. Newhard was plainly irritated. "What are you then doing?"

"Picking raspberries and currants, and preserving."

"Say, was the postman yet at your house?"

"No. Perhaps he hadn't anything for us."

"That's so. Listen, Wergie," Mrs. Newhard was trying to find something to say.

Virginia stood silent.

"Ach, she's gone!" muttered Mrs. Newhard.

Slyly Virginia hung up the receiver. Immediately the telephone rang again, and yet again.

"Virginia!" This was another neighbor. "Has the postman come to your box?"

"No," answered Virginia. "He hasn't."

"What ails him? Where is he?"

"I haven't an idea."

She began to stem currants. Fifteen minutes passed—the phone rang; another fifteen—it rang again.

"Wergie!" called Mrs. Newhard. "He's now on the way! He passed by here, going fast. He didn't stop by me."

"Thank you."

VIRGINIA walked down to the letter-box at the gate. "Did you have an accident?" she inquired.

"Worse than that!" said the postman excitedly, handing out a few letters and a package of books. "Worse than that, Vir-

ginia! We had safe-crackers in the post office. They came with one of those metal-cutting torches and cut through the outer door of the vault, and then they blew it open with nitroglycerine, and they damaged things something fierce. They didn't get much, but one got a shot. They heard him scream. The neighbors heard the explosion and called the police quietly, and they charged the robbers. And the chief of police is shot."

"Not killed!"

"No, but shot. The safe-cracker, he got it pretty bad. He ran down past the jail and out over Culp's Hill. They think he had confederates, but he got separated, and some got away in an automobile. But he didn't, and he's laying somewhere. It was him that shot the chief."

"Did they get a good look at him?"

"No, he had a mask on. He wasn't a very tall fellow; that's all they know. Do you wonder I'm late? I didn't get started anywhere near on time, and every woman along the line has had to hear the whole story. Hello, Foltz!"

Foltz came round the corner of the barn. "Come here; got something to tell you!"

Virginia walked toward the house. "The men are just as much excited as the women, I guess," said she. She looked back over her shoulder—Foltz was standing with his mouth open, his eyes bulging.

"I tell you, I'd like a bead on him!" said he.

"It wouldn't help matters to shoot him."

Foltz walked hastily to his house. Virginia laid the letters on her father's desk, and her parcel on the kitchen table. The wounded dog wagged his tail and looked up at her. Again he tried standing on his foot and again gave it up. His eyes had no longer an expression of agony; touching gratitude had taken its place. She could hear the voice of Foltz shouting out the story to his wife. He started his car—he was going to town. The telephone rang, she answered it; Nell had taken time from her multitudinous duties to call.

"Isn't it shocking!"

"Indeed, it is!"

"I hope they catch the bandit and hang him!"

"Perhaps he got into bad company."

"Perhaps he did." Nell spoke doubtfully, as though she preferred to believe in the congenital perversity of the bandit. "If I hear anything, I'll let you know."

It was one o'clock, and Virginia remembered that she must eat—that was why she felt so wretched! It was two. It was three. She finished the last of her preserving and bathed and changed her dress; then she sat down in a rocking-chair in the cool living-room and opened her books. In a little while she heard Foltz return, and she crossed to the barn and walked on to his house.

Mrs. Foltz sat on the step, looking up at her husband. Foltz stood before her, talking in a loud voice and gesticulating.

"A thousand dollars' reward!" he cried. "They say too it'll be raised yet higher! If he'd come this way, I'd caught him. I'd marched him in, dead or alive! Bet your life on that!"

"That would be an easy way to earn a thousand dollars," sighed Mrs. Foltz.

Virginia walked back to the house. It was almost supper time; she would prepare something slowly, so as to take up some of this unending day. She determined that at dark she would get into the car and drive over to Nell's to spend the night. She had no fear of staying alone, but it was the sensible thing to do.

SHE finished her supper and was washing the few dishes when she heard a step on the porch. She was startled, then annoyed at herself, as she realized that it was Foltz, whose step was always soft and sly. The friendly dog, lying in his corner, thumped the porch with his tail.

"Dog still here?" Foltz sniffed the air. "Bet you wasted a lot of good liniment. Say,"—Foltz leaned his shoulder against the door frame,— "do you remember them Lemurs?"

"No."

"They was train-robbers; they held up a Pennsylvania mail train. They hunted 'em down with bloodhounds. They got 'em, too! And do you remember the Killian Brothers? They was the bold chaps, but they got theirs."

Virginia hung up the dishpan with a clatter. "I don't like to let my mind dwell on such things."

"Afraid?" Foltz laughed. "They only go after big game. Ain't your cousin come yet?"

Virginia stepped across to the telephone, hoping that Foltz would take the hint and go. She meant to tell Nell that she would drive over—how astonished Nell would be to hear that her mother and father were away and that she had spent the night alone.

"If I catch sight of him, I know what I'll do!" went on Foltz. "I'll press that friend of mine against his back, and march him off, double-quick! Let him try to run, it will be dead or alive, you can bet! The reward's the same. I should worry!"

With this vindictive harangue, Foltz ceased. Virginia dressed the setter's foot, then, lifting the receiver, gave Nell's number, and instantly heard a voice. "Wergie!"

"Yes."

"I just called you, Wergie. I have news if you don't. Last night the post office was robbed, Wergie. The men got in a window and cut open the vault. They had a light of some kind, and they burned it open. Is it not wonderful?"

"Yes," said Virginia.

"That isn't the half, or yet the quarter! Listen once!"

Mrs. Newhard went on and on. Foltz had stepped away from the door and across the porch, hissing at the dog as he passed.

"Well, the policeman, he aimed his gun, and—"

Virginia shifted from one foot to the other. "Mrs. Newhard," she began politely. "I'm sorry—"

"I want this line!" shouted someone furiously.

"Yes, well," agreed Mrs. Newhard cheerfully. "I'll call you soon back, Wergie."

"You'll not call me back," said Virginia to herself.

She looked round into the dark rooms. "I shall be gone. The house will be locked, and I shall be gone."

The dog's tail thumped the floor. A dark figure filled the doorway.

"I'm going away, Foltz," said she. "I'm going over to my uncle's to spend the night." There was no response. "Why don't you answer me?" she cried sharply.

There was still no answer. The figure swayed, tottered, plunged forward, fell with a crash, and lay at full length on the floor.

"In the name of sense!" cried Virginia, using her mother's pet expression. "Who are you?"

Still there was no answer. She backed across the room until she could press the electric switch. On the floor lay a man of medium height and slender frame, hatless, black-haired, black-bearded, soiled with earth. The setter began to whine; it was as though the sound came from the lips of the prostrate creature.

CHAPTER THREE

"This Is All a Dream"

VIRGINIA felt at first no fright, only astonishment and compassion. Who could this poor soul be? She walked across the room and looked down at the prone figure, as she looked at the setter with the crippled foot.

She guessed the stranger to be forty years old at least, though on account of the short growth of dark beard it was difficult to guess. He lay in the limpness of complete unconsciousness, one arm flung out at right angles to his body, the other lying against his side.

"What's the matter with you?" she asked, and still received no answer.

The telephone rang, and rang again; she did not stir from where she stood. From the distance sounded the voice of Foltz; it came nearer. He was shouting; it was probable that he was telling new stories and repeating his bloodthirsty threats as he moved round at his work. She remembered what he had said: "If I catch sight of him, I know what

I'll do! I'll press that friend of mine against his back and march him off, double-quick! Let him try to run, it will be dead or alive, you can bet! The reward's the same."

The sound of Foltz's voice grew faint; without any deliberate intention she had already moved toward the door with the idea of closing it. She stopped halfway and stood with her clenched fist pressed against her lips. She saw that across the stranger's pale cheek was a stain of blood, and the fingers of his right hand were scarlet, as though they had been dipped in blood. She took another step toward the door, then again she stood still.

"I can't keep him here when I'm all by myself!" said she.

Again the telephone rang—an extra operator had been put on to answer the many calls.

"Well, Wergie, I'm back on the line," announced Mrs. Newhard. "So he went running—"

Virginia turned so that she might watch the man on the floor. He did not move, but lay as one who had at last found a haven. At any minute the door might open and Foltz might enter. Her

"There's a bed across the hall," said Virginia. She had not thought of suggesting the bed; she had thought only of his creeping in on the floor.

"A bed?" repeated the stranger as though she offered him entrance to heaven. "Not a bed!"

"Yes, a bed," said Virginia. "Can you creep?"



The figure of a man carrying a gun filled the doorway. It was not a tall figure, and it had a warlike and evil look

[PAGE 396]

"Creep?" said he. As he struggled to his knees, a dark drop ran down his wrist to his hand.

Virginia talked to him as she had talked to the setter. "Come now, this way! A little farther! Only a little farther! Perhaps it will kill him!" she said to herself in agony.

THE stranger crept out the door, across the hall, into the spare room. From the kitchen a dim light illuminated his way. He paused to press his hand to his shoulder and to utter a low groan.

"This way," directed Virginia. "Here's the bed."

He lifted his hand and tried to raise his body.

"Perhaps you'd better stay on the floor!"

He persisted stubbornly; however wild had been his life, he seemed to know the uses of a bed. By a powerful effort he raised himself, but he did not secure a good hold and was about to slip back. Virginia took

him by the shoulders and, exerting her full strength, pressed against him. Succeeding in lifting his legs, he lay motionless.

"Now he's dead!" said Virginia in anguish.

His coat was open and his khaki shirt showed no stain of blood, but there was an unnatural protuberance near the shoulder. While she stared he moved uneasily and

with an unsteady hand pulled back his shirt. On the white skin was a blue lump surrounded by an angry inflammation. In his fury against a stray dog, Foltz had once shot a sheep, and her father had shaved the wool and revealed just such a swelling.

"A bullet!" said she, overwhelmed by a feeling of nausea. "I suppose it came in at the back! That's where a fleeing man would have been struck!"

As if her scrutiny roused him, the stranger turned groaning upon his face. Uttering a groan as though she herself suffered pain, she laid her hand on the back of his dark coat; it was not wet, but stiff and sticky to the touch. She looked toward the kitchen, then turned and went into the kitchen. "I hope I don't find anything!" said she, foolishly. "I pray I don't find anything!"

She came back with a sharp knife and began to cut the thick cloth.

"O my!" she cried. "O dear!"

The bullet had entered high on the shoulder, and the hemorrhage had been severe.

It was exactly the sort of wound which would be given to a fleeing man.

"I can bathe it," said she. "There must still be some hot water in the tank. I can soak it with liniment." She poured the dark liquid upon the wound; it burned cruelly, and the stranger tried to move. "It will soon be done," she assured him in a whisper. "Now you must turn over."

Not because he heard her, but because he wished to defend himself from her, he turned upon his back, then, with another groan, upon his side.

"That's right," said she. She looked again at the hard swelling. "Dad touched the skin with the tip of his knife, then the bullet popped out. If I do it, I must do it quickly! Quickly!" She touched the sharp blade to the swelling; instantly the bullet appeared, a small, dark, encrusted object. It came as though it were propelled, and rolled off the bed to the floor. Virginia's foot struck it and it flew under the long valance. She lifted the liniment again and poured out a liberal flood. "There," said she, "there," as one might to a child. She laid a soft towel between flesh and clothing.

Sinking into the rocking-chair, she regarded her patient.

"Those desperadoes go armed," Foltz had declared. "Armed to the teeth, and anybody who gets in their way is just as good as dead."

She stepped back to the side of the bed and laid her hand upon the stranger's pockets. They seemed to contain but one object of any size—a paper-wrapped parcel in the pocket which was uppermost. She drew it out. It was a sandwich such as one would buy from a farmer—thick, with an abundance of butter and a good cut of meat.

Her eyes fell upon the stranger's shoes. They were odd in shape, as though they had been made by hand, and the soles were enormously thick. It was uncomfortable to sleep with one's shoes on, but if the man had to jump up and run for his life he would need them.

She carried the sandwich to the kitchen and sat down on the settle holding it in her hand. She could hear no sound except the cry of the whippoorwill from the woods near the house. She looked at the clock; the hands pointed to ten. She wished that she might turn out the light and open the window, but she was afraid—Foltz might be walking about. She sat, holding the sandwich in her hand. She thought longingly of her bed, of smooth sheets, of a soft pillow beneath her cheek.

"I'll have to lock him in," said she. "If he stays, that's what I'll do. But I'm dreaming!"

[CONTINUED ON PAGE 394]

READY, ALL-STROKE!

America's great crew coach tells you
how it is done

By Russell Callow

Crew Coach, the University of Pennsylvania

EDITOR'S NOTE: "Rusty" Callow, who has generously taken time from his pressing duties to write this article for you, needs no introduction to rowing men. He is one of the most famous crew coaches in America, and his University of Washington crews have often been victorious at the great Poughkeepsie regattas, as well as on their own courses in the West. This year Mr. Callow has been coaching the University of Pennsylvania crews, which have been rather in the doldrums for some time but may soon be expected to emerge into prominence under his sensible methods and inspiring personality. The Olympic Games, held this year at Amsterdam, Holland, provide a world's championship for eight-oared crews, and rowing is fast becoming one of the best-known and most interesting of all amateur sports.

chimpanzee. But physique alone will not keep a man in a shell, if he cannot produce the goods. A man with intelligence and nerve and fight can always win his place. The 150-pound crews provide places for the smaller men.

Physique, Nerve, Skill

I have said that crew is the hardest sport. It is for this reason: not only does it require perfect physical condition and development, but it also requires mental balance—poise, concentration, clear think-

THE greatest sport in the world! That is what I think of rowing. It is the hardest sport, yes—and one of the cleanest. As a builder of men, it has no equal. That sounds too strong, perhaps, but have you ever felt the joy of sitting in a racing shell?

When you feel the triumphant happiness experienced by eight men driving a frail sliver of wood through the water, at a whirling pace, to a regatta victory of a few scant inches, and when each man's motion is so perfectly coordinated with the motion of his seven mates that the rhythm of the eight oars is beautiful to see and feel—then you will know that no other sport in all the world is so fine.

The editor of The Youth's Companion asks me if it is possible for a boy to "make" a college crew while he is still in high school or preparatory school. I know what this question means. Many a star college baseball, football, basketball or track man learned all the fundamentals while in school, and came to college fully prepared to excel in his favorite sport. Can the would-be college oarsman do the same? How can he when few schools maintain boathouses with racing shells and competent coaches? The man who wants to row in college has seldom had an oar in his hands before he reports for practice with the freshman rowing squad.

Personally, I am glad this is the case. It gives everybody an equal chance. It is a fundamental principle of this country that all men are created equal. When I look over a freshman squad, I see men who have the same opportunity—except those few and unfortunate men who have let their arms and backs and legs grow soft through lack of sufficient exercise, or who have injured their hearts and lungs by excessive use of tobacco or stimulants. These individuals can be weeded out, almost at first glance. No coach has time to give them. They must put themselves under the college physician or physical director and slowly build themselves into right condition—if they have the heart and courage to do so.

The remaining candidates always prove to be of widely different types—big, small, tall, short or fat. They are all welcome. A coach is naturally delighted to find a big, strapping six-footer, with arms as strong as those of a

ing. The body must, at all times, be kept in absolute control by the mind, even when the very last ounce of strength is being spent in a race.

Watch eight recruits in a shell for the first time. The boat rolls from side to side; it checks between strokes; the oars splash in and out with no rhythm at all.

Watch the same crew six or eight months later. The shell rides as steadily as if Neptune himself were holding the keel to steady it. Coordination and poise, acquired through many days of intelligent concentration, alone will produce the results which you see in a championship crew.

Rowing Takes Training

People who know rowing only through newspaper accounts perhaps think it is all a matter of brute strength, with the strongest men sure to win. Nothing is farther from the fact. You can yank a rowboat through the water pretty fast if you are strong; but there is as much difference between handling a rowboat and rowing in a racing shell as between jogging home on the back of a plow-horse and riding a thoroughbred hunter over a hurdle.

The same difference in nerve and skill is required, for it is not merely strong backs and legs that win crew races; it is what the shell does between strokes of the oars. The shell that wins is the one that keeps on going after the oars are lifted out of the water. You



"Rusty" Callow, with the battered tin megaphone through which he has directed many a winning crew. Below, a varsity crew; Syracuse University's crack team on a practice row



Photo by M. A. Olenchak

could put eight professional strong men in a crew, and—until you taught them the art of keeping their boat going between strokes—they would

be beaten in a race by a crew of high-school boys—provided the high-school crew was well trained.

I remember a beautiful example of this at a recent trial race. Six crews lined up. Crew A consisted of moderately big men, and Crew C of giants—as heavy and strong a boatload of men as anyone ever saw. When the signal was given, the forty-eight oars churned water together; all the boats had been ordered to maintain the same number of strokes to the minute.

Crew A—the first varsity boat—pulled hard, but Crew C pulled harder. The big men of Crew C seemed to be trying to jerk the outriggers off their boat, and the shell shot ahead at each stroke as if it had been catapulted from a cannon. But when the oars came out of the water, the shell jerked almost to a stop. In this curious fashion, now darting forward, now stopping, Crew C labored down the course. Meanwhile, Crew A was gliding smoothly along, using far less brute strength, but riding so smoothly that it was two full lengths (120 feet) ahead at the end of a mile.

You can figure out for yourself how far the first crew would have been at the end of a regulation four-mile race; especially when, toward the end of it, their coxswain would have called for a spurt, and the stroke would have been increased from about thirty-two to forty a minute. Crew C, exhausted, could not have met this challenge, so that the distance between the crew that knew how to

row and the crew that did not might have been eighteen or twenty lengths at the end.

Here Is Ideal Comradeship

Now you begin to see what skill, not mere strength, can do. This skill is developed by a long process. Yet it can be kept from becoming drudgery. The fine comradeship among the crew members is proverbial; and when the eight oarsmen, the coxswain and the coach are in full accord the friendship and interest that spring up among them are as fine as any relationship you can find in the world.

At the beginning, all the recruits—tall ones, small ones and all—are dumped into the rowing barges for first workouts. Barges are flat-bottomed scows that hold about twenty oarsmen, and if everyone pulls hard enough they can be pushed through the water at about rowboat speed. While the recruits are learning the principles of good rowing, the coach is learning much about the character and intelligence of each recruit.

After a few weeks in the barges, the best and most teachable men are put into shells. Barklie Henry, former Harvard crew captain, has described the racing shell so accurately in a recent story* that I need not give particulars here, except to say that the shell, though about sixty feet long, is built so light of thin wood and waterproofed silk that men can easily lift it out of the water and carry it into the boathouse. Every superfluous ounce is eliminated; there is hardly any other object of equal size so skillfully constructed to save weight as a shell. Yet it can and does carry at least fifteen hundred pounds of human weight speeding at an average rate of twelve miles an hour. If this, measured by motorboat standards, seems slow to you, remember that no human runner can keep pace for four miles with an eight-oared shell.

When you take your seat in a shell, you will sit on a sort of small wooden saddle, which runs back and forth on tracks. To reduce friction, small wheels are fitted on the lower side of the seat. Your feet are the only part of you that remains stationary; they are

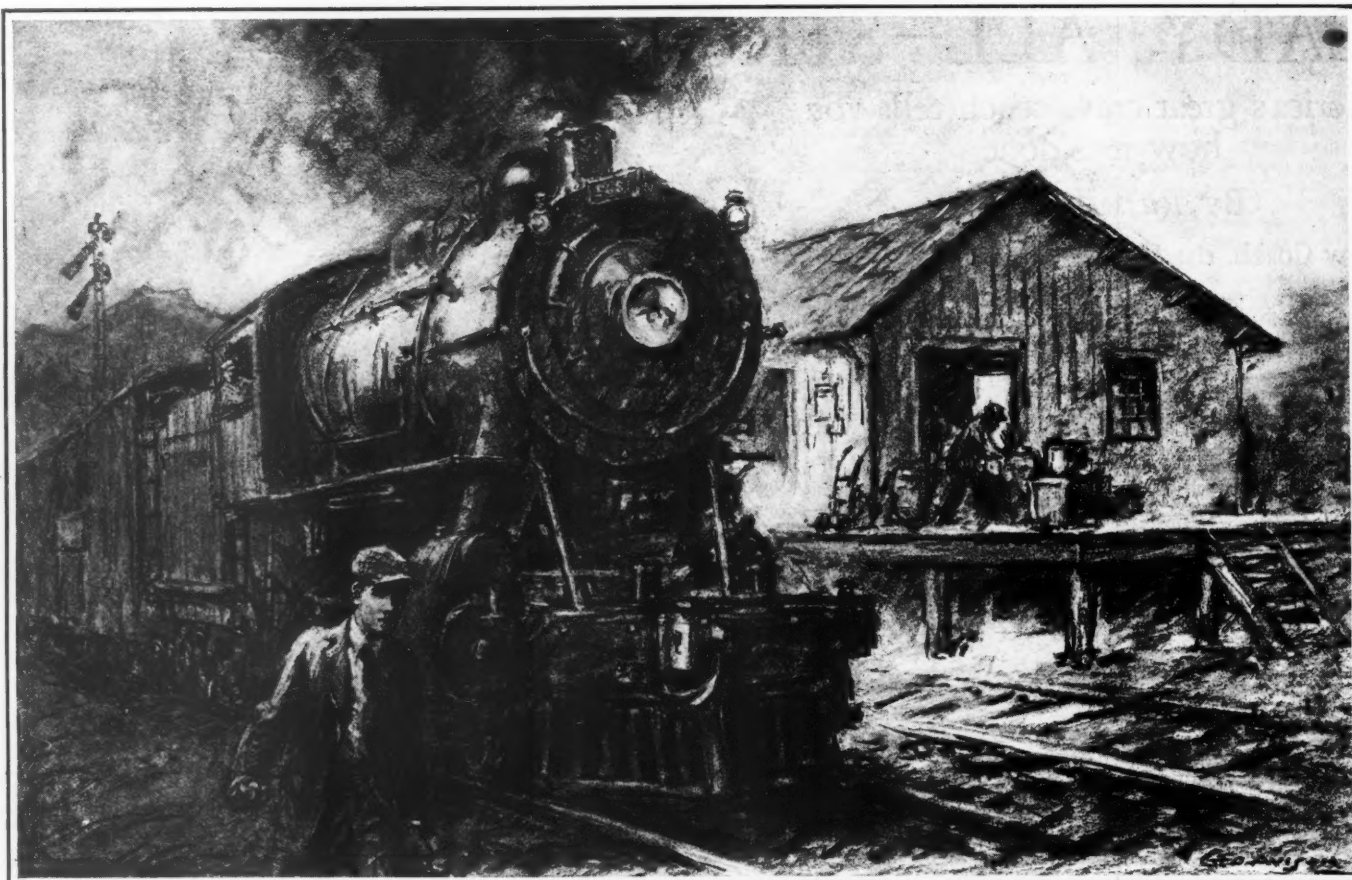
* "The Shrimp in the Shell," The Youth's Companion, April 29, 1926.

[CONTINUED ON PAGE 405]



Times-Wide World Photo

The finish of a race; the Oxford crew at the end of a grueling pull. Note the supreme effort that goes into the last few yards



So Jimmy waited his chance and boarded the first freight leaving the yards, headed across the mountains back east

JIMMY BYERS, railroad scholarship man at Jordan University, sat at his desk in the New York central offices of the Old Stony system, and stared lazily out the window. As assistant to the president of the lines, Mr. Allison, he had no particular routine duties and consequently was idle some of the time. Summer vacation was almost over, and he wished the fall semester would hurry up and begin. He wanted to get back to Jordan and report for football.

Except for the time spent with Charlie Allison the summer had been dull. No new assignments carrying excitement had come his way in the Old Stony system, and he wondered whether he had really earned his salary. However, President Allison had not complained, and until he did so Byers felt he should not worry. Charlie Allison had an interesting job, working on high-tension transmission projects for a big electric utility on the Pacific Coast. They had talked a great deal about electricity, Jimmy learning all he could because he thought that ultimately the railroads would use electric current for power. But Charlie had gone back to work after a summer with his parents, and Billy Armstrong had not returned from his travels as yet. It would be fun, thought Jimmy, to get back to Jordan and join up with Les Moore, Big Jake Hilligoss and the rest, in football togs.

His musings were interrupted by the sound of the buzzer on his desk, calling him into President Allison's office. He rose and hurried across his room to the door of the president's private office.

"Byers," said the president, "come in. This is Mr. Macklean, Jim, a member of the executive committee. I want to introduce you to him, and he wants to know you. I've been telling him about the way in which you and I became acquainted, the water problem out there on my old road, and your idea for solving it, and also about your help last year on the hook-up with Scogis and your landing the Universal Metal business. How soon do you go back to school?"

"I ought to be there on September 10, sir," Jimmy replied, bowing to Mr. Macklean.

"And it's now the 24th of August," Mr. Allison commented. "A little more than two weeks."

"What are you doing—and what university?" Mr. Macklean asked, studying the boy impersonally.

INDIRECT CURRENT

By Jonathan Brooks

ILLUSTRATED BY GEORGE AVISON

"I go to Jordan University, and I'm studying the economics of the railroad business, with a scholarship created for railroad study, sir," Jimmy answered.

"H'mm—that scholarship; it pays all your expenses?" Mr. Macklean pursued.

"All except my board, sir."

"I see. What would you do, without the scholarship?"

"Well, I've got two more years to go, sir, and I'd try to work my way."

"Last year you were on leave of absence, on salary, from this office?"

"Yes, sir, thanks to Mr. Allison," said Jim.

"Thanks to your smartness in helping us put through that Scogis deal," President Allison explained. "I might explain, Jim, that we're reorganizing here, as you know, with a view to greater economy. And we're afraid we may have to cut you off salary when you go back to school. Sorry, but—"

"You do not need to worry about me, Mr. Allison," spoke up Jimmy. But his heart sank. "I can look out for myself. I saved some money last year, and I can get a job waiting table, or something, and get by!"

"I'm not saying that you will be cut off the payroll until next summer," protested Mr. Allison. "But only that you may be. I'll let you know before long, so that you can make other arrangements in plenty of time. If you wait table, will you have time for your studies and still be able to play football?"

"Play football?" snorted Mr. Macklean. "Do we have to worry about his playing football?"

"Oh, no, of course not," Mr. Allison laughed. "But I've got an idea that playing football will help make a smashing, two-fisted railroad man out of him. Now then, Byers," he continued, turning to Jim, "I have something for you to do that will keep you busy until time to light out for Jordan. I've just been telling Macklean about it. No reason for you to stay here in town, is there?"

"No, sir, I'd like to get out."

"All right. You know that our whole staff is working on the problem of operations on the Puddy division. The double range of Puddy Mountains is about to ruin us," he explained. "This is true now, because we have almost doubled our freight haulage in the last two years; especially, since we have completed the Scogis hook-up. Our freight engines are rapidly going to pieces. Our fuel consumption is enormous. Our schedules for freight movement are shot all the time. We have to do something."

"They tell me we have to use three engines sometimes, sir," said Jim.

"Some of our engineers want to electrify the mountain division," President Allison continued. "That would cost a tremendous amount of money. It is 182 miles long. Electric-powered engines could haul heavier loads and make better time than the old steam engines. We could handle even more freight than we're now hauling. On the other hand, the installation of electric facilities might break us up. And the power bill would be enormous, too. Two companies, one at Potterton, on this side of the mountains, and one at Swain, on the other side, are pushing the electric idea, quoting rates, and so forth. But we do not know yet what we want to do. Now, then, Jimmy, here's what I want you to do. It's hardly likely you can do anything, but I wish you would go out on the Puddy division and just loaf around on it for two weeks. See what you can see, hear what you can hear. I've just been telling Mr. Macklean that sometimes an outsider who is not a railroad man, nor an engineer, nor a financier, can get a better perspective than we can. We look at things with slide rules, and tariff schedules, and costs-per-mile, and so forth, so much, that we sometimes cannot see a new thing that is squarely in front of us."

"Gosh, Mr. Allison," Jimmy grinned. "Sounds to me like a large order. Of course, if you want me to, I'd like to do it."

"Our president," chuckled Macklean, in sarcasm, "sends a boy to mill."

"To hills," corrected the president, good-naturedly. "Jim, you've got your universal pass. Get me an order for some expense money and light out this evening. Keep your eyes open, and your mouth shut, as much as you can. And come back two weeks from today. All clear?"

"Yes, sir," Jimmy acknowledged. "I'm glad to have been introduced to you, Mr. Macklean."

THAT evening, without any further explanation from President Allison, Jimmy left New York to spend two weeks loafing along the Puddy division of Old Stony. He felt woefully handicapped by lack of railroading knowledge, but cheered up when he remembered that President Allison did not expect him to bring in a scientific railroad report. And then he turned blue again as he thought of the prospect of losing his pay check for the coming school year.

"It's not that I think I'm entitled to it, when I'm not working," he told himself. "But I'll have to get a job, and it will take time off football and study, too. Might quit football—"

But he knew he could not give up the game. There would have to be some way out of the difficulty. His first thought was that he should write to the football coach or athletic director at Jordan and ask to be considered for some kind of spare-time job paying enough to make up the difference between his scholarship fund and his total expense. Then he decided that it would be hard to explain his situation in a letter, and resolved to wait until he reached Jordan before making any plans for working.

Jimmy left the train at Potterton and stayed all night. He had no program of action, except that he wished first of all to ride over the mountains in daylight. Next morning he boarded an early train and rode across the double mountain ridge to Swain, at the other end of the division. He studied the country from his window, and at each stop he got off the train and looked about until the conductor yelled "All aboard!" But when he reached Swain he had learned nothing except that the roadbed was good and smooth, and the Puddy Mountains beautiful in fair weather. Neither of these two discoveries promised to help him.

Clearly he had come across the mountains too quickly to learn anything about the

railroading difficulties entailed in the trip. He must go back more slowly, maybe walk, perhaps get on a handcar. But then no handcar could climb those grades without breaking the backs of the men working it. Some other way. He thought about this late that afternoon as he went out for a walk around Swaim. On his walk he saw some workmen building a new line of towers for high-tension transmission of electricity. A sign posted by one of the new towers advised that this line was being built for the Puddy Mountain Electric Company, but Jimmy noticed that a truck working on the job, two or three chests and some more equipment bore the initials, G. N. E. P. C.

"Those letters do not stand for Puddy Mountain Electric Company," he thought. He dug into his memory to see if he could recall any corporation name that fitted the initials, but could not, at the moment. He did not ask questions, but just out of curiosity he wandered through the town and into the neighborhood of the central generating plant of the Swaim station.

Next morning Jimmy went down to the station and asked the ticket agent, first showing him his universal pass, for the slowest train to Potterton.

"That would be a freight, mister," said the agent. "You don't want—"

"Just the thing," Jimmy exclaimed. "Why didn't I think of it sooner? Where can I ride, on a freight?"

"Why, up in the crow's nest of the caboose, if you like," the agent replied. "Leastways, I don't think the conductor would bar a guy with a universal from goin' up there. Swell place to ride, on a hot day. See the mountains?"

So Jimmy waited his chance and boarded the first freight leaving the yards, headed across the mountains back east. The conductor, an elderly Irishman named Tim O'Shea, welcomed him.

"Glad to have company," he said. "It's a long, hard pull up them mountains, and when I set back here by myself I get to tryin' to shove, or pull, or something."

Byers made friends with the old freight conductor and talked with him for hours. When they were aloft in the crow's nest and atop the long, winding ridge, with the windows open, Jimmy enjoyed the ride tremendously. Far ahead, around two or three turns, they could hear the engines panting and puffing, but back here all was quiet, and, despite the hot sun, cool and breezy. Jimmy could see for miles out across the valleys below them, but after a few treats to his eyes he kept them on the roadway as it unrolled and flew behind them.

"Looks to me as if there would be room for another track or two," he said.

"Grandest right of way across these mountains," O'Shea declared. "The old byes that built this road, fifty-sixty year ago, thought they'd want six or eight tracks some day; so they bought a plenty of ground. But yit we ain't never had enough business to keep two tracks busy till this last year or two, since this man Allison took ahold. And he must be a railroadin' fool, for we've been on the jump ever since. I never see two tracks carry so much freight in all my life."

"What is all this freight?" asked Jimmy. "I thought I'd see a lot of coal cars, but these ahead of us are mostly box cars."

"Live stock that's got to be watered, furniture, and automobile, and grain, and lumber, and steel machinery, and heaven knows what all," muttered O'Shea. "And glad I am it's not much coal, either. I lost a brakeman once, fallin' off a coal car, when the lumps shifted under him. Devil's own job, gettin' up front, when y've got a lot of loaded coal cars. Ever try runnin' over a load of coal, train on the move, goin' around a curve, now?"

"Never did, but it must be a job," Jimmy grinned. "This coal business ought to help pay our wages, though. I noticed that the electric company back at Swaim gets coal in off other lines."

"And so does the one at Potterton," O'Shea added. "For we niver haul them none. Thousands of carloads a year them two plants get, but blessed little off our roads."

JIMMY left O'Shea and his train at Puddy, the little city in the Puddy River valley, between the two ranges of mountains. As he did so, he made two mental notes—a right of way twice as wide as a railroad should need or use; two electric plants, the biggest coal users on the division probably, ship in coal over other railroads. He might have use for these two facts, he thought.

For two days he loafed about Puddy. The

ticket agent telephoned him an introduction to the manager of the electric-light plant, and Jimmy called, to ask questions. The plant man gossiped freely. His company, he said, also owned a little plant at Puddy Junction, eight miles up the river and another at Puddyville, six miles downstream, where there were two big paper mills, a cutlery factory, and other big consumers of power.

"Are these three plants connected?" Jimmy asked.

"Oh, yes, and we generate all the current here at Puddy," the manager explained. "But some day there'll be a line across from Swaim, or one over from Potterton, if they can ever get a right of way or build the towers over those steep mountains and deep valleys; and then we'll shut down this plant."

"Do the people that own those companies own this one, too?" Jimmy asked, interested more than he wished to appear.

"No, but they can make juice a lot cheaper than we can, pay us a fair price for our plants, take over our customers, and made good money," was the answer. "Fact, they've sort of got us to promise we'll sell when they get here."

"That's the G. N. E. P. C. outfit?" queried Jimmy.

"Yeah—you an electric man yourself?"

"No, but I've heard the name," said Jim. "Friend of mine is an engineer, working out in the Northwest. I've heard him talk about this superpower business. Interconnection, and all that."

"I see. Well, it's a great thing. No sense in our paying freight to haul in a lot of coal to make current, when cables can bring the juice from plants close to the coal mines," the manager added. "Those people want to come through here, I understand, to sort of link up loops at Potterton and Swaim. The business here would only help a little toward offsetting expense. It will be an awful job, expensive and so on, to get over these mountains. If it wasn't for that, they'd been here long ago, and had a gap in their system closed up. You see, a railroad track can run back and forth, but an electric transmission system ought to be in closed loops. Electricity runs in circles—see?"

"As nearly as a fellow can if he's not an electrical engineer," said Jim.

"Well, wait now; maybe I've got a map of those G. N. E. P. C. lines." And the manager looked into his desk for a moment. "No, I must have thrown it away. But if you are going over to Potterton, stop in the Potterton office, and they'll give you a map."

Jimmy stayed in Puddy that night, desiring to ride another freight train to Potterton in daylight. He kept thinking of the initials G. N. E. P. C. in an effort to remember where he had seen them. When he fell asleep in his hotel room, he was still baffled. Not until about noon, the next day, riding around mountain sides up in the caboose crow's nest, did he remember. Then the meaning of the initials came to him in a flash.

Arrived at Potterton, Jimmy boarded the first fast train back to New York. His two weeks were not ended,—not more than begun,—but he had an inspiration and felt there was nothing more he could gain by staying out on the mountain division. It was midnight when he reached his room in the uptown apartment where he lived, but he stayed up long enough to rummage among his things, find a copy of an electrical magazine Charlie Allison had given him, and seek out a map of the Great National Electric Power Company.

There was the map, showing Potterton, east of the mountains, and Swaim west of them. Each city appeared to be on the end of a long chain, scattering in many directions, of transmission lines. But there was no connecting link. Electric companies on both

sides of the mountains belonged to the big corporation.

"Close that gap!" exclaimed Jimmy, to himself, wearily. "Hook up those lines—widest right of way you ever saw—and those companies don't ship coal over our lines."

YOU here, Byers?" exclaimed President Allison, next forenoon. "Thought I told you to stay two weeks."

"Yes, sir, you did, but that's a long time out in the mountains," Jimmy grinned, as he noticed Mr. Allison smiling. "I got an idea, and I thought I'd come right in and—"

"Wait, wait a minute," the president interrupted him. "I don't suppose it's any good. But I want you to wait. Did I tell you about Mr. Macklean?"

"Only that he is a member of the executive committee, and is heading an economy reorganization," said Jimmy.

"Well, he is probably the tightest, stingiest man in New York City, including Brooklyn and Newark," Mr. Allison laughed. "He balked when he found out you were on leave of absence with pay last year, horrified. Said he wouldn't stand for any such wild-eyed extravagance. I explained the value of the work you did last summer, but he said it was your job, and you were paid for it. I said, yes, but we might be grateful, and his answer was that you should be grateful for having a job."

"Well, I think I am grateful," said Jim. "And I don't expect to be paid for going to the university this winter."

"Now then," continued Mr. Allison. "The other day we were talking about this mountain division problem of operations, engines laid up for repairs, too heavy loadings, three engines to one string of cars, and so on. He's all for electrifying, but the expenses scare him to death—"



Jimmy asked the ticket agent for the slowest train

"Mr. Allison, I've got an idea," Jimmy interrupted, excitedly.

"Wait," said the president. "I said, just for fun, I'd send you out, and prove to him that you earn your salt. Anyway, it's up to you to help me convince old man Macklean. I'll call him up and ask him to come down right away, and I won't listen to you until he gets here," said Mr. Allison.

Jimmy, utterly surprised to find that he had very coolly been placed in the hole that able engineers, railroad men and financiers had been trying to fill, shivered.

When, fifteen minutes later, Mr. Allison rang his buzzer, Jimmy got up from his desk, clutched the electric magazine Charlie had loaned him in his hand, and went into the president's office with his chin out.

"Hello, boy," said Mr. Macklean, coldly. "Sit down, Byers," said Mr. Allison. "I

asked Mr. Macklean to come up and hear what you have to say. What have you seen, Byers?"

"I came in before the first week was up," began Jimmy, slowly, "because I thought I had found out all I could; and because I'd like to get away and go back to Jordan ahead of time, so I can find a job for this year."

"Well, speak up; what did you find?" asked Macklean.

"These things, sir," and Jimmy raised his voice a trifle. "You said, Mr. Allison, that these two electric companies at Potterton and Swaim have been talking electrification to us. Well, they have a lot of nerve. They ship in thousands of cars of coal a year, but hardly any of it goes over our lines. I think they should be told to patronize us before they ask us to patronize them."

"Amen," smiled Mr. Allison, making a note.

"These two companies belong to the Great National Electric Power Corporation, which has a great transmission system, with a gap in it—between Potterton and Swaim. They want to close that gap, by connecting the two towns," said Jimmy, aggressively. "They've promised to buy electric properties in the three towns on the Puddy River, as soon as they can cross the mountains."

"Well, let 'em go ahead and close it," snapped Mr. Macklean. "What's that got to do with us?"

"It would cost them too much to buy right of way and build over those steep mountains and deep valleys," said Jimmy. "So they sic their two near-by companies on us, to sell us electrification. If we electrify, and buy current of them, they'll have lines running across the mountains."

"We have a right of way across these mountains that was bought and laid out by men who thought that we might want six or eight tracks, some time. It's plenty wide

enough to carry a line of power cables, alongside the track space. Offer to sell the G. N. E. P. C. a right of way, and see them snap it up. Then, if they're shipping coal over our lines, and paying us for right of way, we can talk about buying electricity off their lines."

"That's different from building the lines ourselves, and letting them use them afterward," Macklean, exclaimed Allison, enthusiastically. "Here, where's a map?"

"Right here, sir," and Jimmy produced his magazine, opened

at the right page. "Here's the layout."

"If that's not the ticket, I'll eat my hat, Macklean," Allison proclaimed. "After all our engineers have wrestled with this thing, we stumble right on the answer."

"Boy like you ought not to stumble, though," said Macklean sourly. "Where'd you learn this sort of thing—football?"

"Well, no; I got this idea from wrestling," Jimmy replied, grinning.

"Our wrestling coach told me the thing to do is to grab the other fellow the other way from that in which he wants you to tackle him, see?" said Jim. "These electric people wanted us to tackle them by our end of the problem; so I tried to figure out their end of it, and tackle that."

"Fair enough, fair enough," muttered Macklean. "But it beats the band how this kid comes through, when all our high-powered, high-priced talent falls down. Well, much obliged, boy. I hope you have a good time playing football."

"Thank you, sir," said Jim. "Mr. Allison, could I go on back to school, right away? There's only about a week left, now, and I'd like to get back early so I can find a job."

BACK at Jordan, the day of registration, Jim Byers paused in joyous reunion with Moore, Hilligoss and the rest to read a telegram that came for him:

"Macklean and executive committee say your indirect current will electrify Old Stony at big saving stop Macklean says your old salary and leave end new leave starting now and new salary coming next week stop best regards Charles J. Allison."

MY ANSWER TO THE CHALLENGE

Commander Byrd tells you more about



The Samson

With this issue Commander Byrd continues his series of articles on South Polar exploration. A few weeks after you read this his expedition will have sailed from New York for the Bay of Whales on the first lap of his journey south. The story that you have begun in the pages of *The Companion* you will find continued in the newspapers throughout the country. In them you will read, as the weeks go by, of the achievements of a great and gallant explorer and his equally gallant expedition on a journey that has had few parallels for courage and daring.

NAPOLEON, I think, is credited with the famous remark, "An army marches on its stomach." He might well have added, "And so does any other expedition."

Particularly is this true of expeditions into regions of extreme temperature. Every one is familiar with the bad effects of the tropics on white men who have not had time to become thoroughly acclimated to the heat. That long-continued extreme cold may produce the same slowing down of vitality and decreased resistance to disease is not so well known. It is vitally important, however, and has been the subject of study by every explorer interested in keeping his men fit during long polar sieges. Clothing has something to do with it. In the tropics it is possible to dress in a fairly comfortable manner. At the poles, quantities of clothing that keep all air from the body and whose weight is a burden must be worn almost continuously. But more important even than clothing is diet.

For many months now the medical director of the expedition, Dr. Francis D. Coman of Johns Hopkins Hospital in Baltimore, has been studying that question. With him rests the responsibility of keeping all of us healthy during our stay in Antarctica.

On board the *Samson* the food will be much the same as on any other vessel. Gething and Tennent, the two cooks who went with me on the *Chantier* to Spitzbergen in 1926, will be aboard, and I have no doubt will provide the same admirable fare as they did two years ago. From New York to New Zealand, across the tropics from one temperate region into another, there will be little trouble. At Dunedin, New Zealand, fresh supplies will be loaded, and not until the frozen shores of the Bay of Whales are reached, and our village laid down, will the problem of what we must eat become of paramount importance.

Among other things, but perhaps most important of all, we must guard against scurvy. For centuries this disease has attacked sailors long at sea, the inhabitants of beleaguered cities, explorers—everyone who is cut off from fresh food and made dependent on preserved meats, hard-tack and the like. Scurvy has taken a great toll of life in polar exploration. There are many preventatives or anti-scorbutics used; one of them, lime juice, has been required in the British navy since 1795, but I have been able to discover only one sure preventative—fresh meat. Fruit and vegetable juices—even

vinegar—are supposed to be safeguards against it, but they are not sufficiently sure to be wholly relied on. Doctor Coman is making extensive studies covering all anti-scorbutics, and experiments are being carried on with a view to obtaining the scurvy-preventing vitamins in a compressed tablet form. If these are successful, the product should prove of the utmost value in many fields of endeavor.

Food and Containers

How our supplies are packed will be almost as important as the supplies themselves. Getting as much as possible into the smallest space will be necessary, of course, but getting it there safely will be equally important. Containers will take up valuable weight and space, and so wherever possible they will be made to answer two purposes. As many as possible of our packing cases will be standardized in size and construction. When they have been landed at the base they will be stacked like the four walls of a house and roofed over. Supplies will be withdrawn from the inner ends of the boxes, leaving a shelter which can be used for storage or workshops.

This will apply only to such goods as may be frozen without serious detriment. The others, reduced to a minimum in quantity, will have to be stored somewhere in the heated huts. After the Bay of Whales is reached we shall not be able to use the ordinary tin can with which every grocery store is filled. In temperatures below -35 degrees Fahrenheit, tin undergoes a curious change, becoming brittle and falling into powder at the least touch. In the extreme cold of Antarctica the tin plating of the cans would soon fall away, and the bare iron left would rust through in a short time. Substituting glass is out of the question on any extensive scale because of its weight and liability to breakage. Cans made of some such non-corrosive alloy as Monel metal will probably be our solution.

Our tentative provision list has been prepared for eighteen months, so that, if it is necessary to wait until the fall of 1929 to make the flight over the South Pole, there will be no shortage of food.

Twenty-two tons of frozen meats, including mutton, veal, corned beef, corned tongue

and shoulder, fresh pork and pork sausage, smoked ham, bacon, two tons of chicken and half a ton of frankfurters, as well as many other varieties of meat, will form one of the largest items. In addition to the frozen meats there will be several cases of ox-tongue, deviled chicken and ham, beef extract, chicken and bouillon cubes. The latter, requiring only the addition of water to be ready to use, will be especially valuable on the final flight and on ground work with the dogs. Twenty-five hundred pounds of pemmican will be taken. Elsewhere, on the following page, you will find a list of the other major items of our commissary. There will be plenty of extras—the little things that make all the difference between real food and what would otherwise seem a bread-and-water diet, no matter how healthful it might be. Sherry, a quarter of a ton of assorted candies, and a great variety of articles like fancy biscuits and tinned plum pudding will supply this welcome variety.

The quantity of flour taken will insure a continuous supply of bread, cakes and pies. Bread and biscuit will be cooked fresh daily at the main base, assorted cakes every night, and pies three times a week.

utensils, food for the dogs, and in the remaining space food for the men.

Naturally, that food must be as concentrated as possible. The great stand-by of all polar explorers has been pemmican, or polar hash, as it has been called. Formulas vary, but the usual composition is dried meat, one or more cereals, suet, lard or other edible fat, and sometimes raisins or the like. Sometimes fish is substituted for the meat. Personally I prefer pemmican without sweetening, and most of ours will be without it.

Preparing it for use is quite simple. Water or snow is added, and the mixture heated over a kerosene pressure stove into a sort of mush. Any other odds and ends of food on hand may be dropped in, resulting often in a weird and wonderful stew. On a long and bitter trip with food running low and every ounce of energy needed to carry the men on, it is usually necessary to kill the dogs, one at a time, feeding skin, bones and refuse to the other dogs, and cooking the rest for food.

At the Bay of Whales we expect to kill a hundred tons of seal, which will be prepared and stored in natural refrigerators. Part of this meat will form the principal food of the dogs, and the rest will be for us the best known preventative for scurvy. Scurvy is thought of as a disease limited to mankind, but dogs may suffer from it just as seriously as ourselves, and the seal meat will serve this purpose for them also. Seal meat is not particularly appetizing, for the seals feed on fish and their flesh is apt to be rank and oily, but, liberally doused with sauces, it will not be far different from venison.

Motive Power at the Poles

I have mentioned before the dogs which will go with us in addition to the tractors and planes, to augment our mechanical equipment and supply us with the safest method so far discovered of traveling overland in polar wastes. There will be nearly a hundred altogether; Eskimo dogs for the most part, brought down from Alaska. There will be a nucleus, however, of highly trained half-breeds, known as Chinooks. These dogs are the result of interbreeding Eskimos and German shepherds, and are the finest sled dogs known. They combine the tremendous brute strength of the Eskimo with the great intelligence of the shepherds, and are so clever that they will be used at the Bay of Whales in breaking in the Eskimos on our particular type of sled-work.

Arthur T. Walden, at his farm in Wonalancet, N. H., has been training the Chinooks through the past winter, assisted by three drivers who will accompany him south, and by "Scotty" Allen, one of the country's finest drivers. Arthur Walden himself is a seasoned veteran, trained in the early days in Alaska, when dog-sledges were the only means of communication, and the sledge-driver had to keep going day or night in all kinds of weather, and over country treacherous with ravines and frozen rivers.

At the head of his group is Chinook,



Times-Wide World

With cap and gown; Commander Byrd adds the degree of Doctor of Aeronautics to his other distinctions

Fuel away from the base and in the shelters will be kerosene, but at the main base coal will be the mainstay.

On the sledging expeditions the food supplies will be radically altered, so that every ounce of available space on the dog-sleds may be used to best advantage. The sleds will be arranged in trains of two, with seven dogs pulling, and the second sled hitched to the first by crossed chains. The first will carry about eight hundred pounds, the second four hundred. In this carrying capacity must be stowed one or more tents, whatever equipment for observations or other purposes that may be necessary, cooking



Dr. Francis D. Coman, the doctor in charge



Bernt Balchen, pilot-mechanic



Thomas B. Mulroy, the engineer of the expedition



Chief Petty Officer Harold I. June, pilot-mechanic



John S. O'Brien, one of the expedition's surveyors



Arthur T. Walden, veteran sledger in charge of the dogs

MEMBERS OF THE EXPEDITION: SOME OF THE MEN WHO WILL ACCOMPANY COMMANDER BYRD TO ANTARCTICA

OF THE SOUTH

his plans for conquering Antarctica

generally considered the greatest of them all. His grandmother was Polaris, the Eskimo dog which led Peary's team on the expedition that discovered the North Pole, his father a German shepherd rescued from a Massachusetts pound. For strength and intelligence he has few equals.

He and his comrades will be the leaders of our teams, and the finest of them will probably comprise the team to be taken, together with a light sledge, on the plane that makes the final dash for the pole.

The sledges are now being built at South Tamworth, N. H., of specially selected straight-grain ash, and under Mr. Walden's personal supervision. They will be the Alaskan freight-sled type, of basket design, ten feet in length, with a long detachable geepole on the front of the left-hand runner, and both double- and single-ended sleds will be included. The geepole, carried only on the first sledge of the two-sledge trains, will be used in steering and guiding the dogs. Harnesses and collars are being specially made so that they can be handled with gloved hands in extreme cold, and a mile of rope will go along for lashings and traces. The traces will be simple; the leader is fastened to the end of a long center rope, and behind him are three pairs of dogs, fastened two and two on either side of the central rope. The leather portions of the harnesses will be bitter-tanned to prevent the dogs eating them.

In driving, the man in charge walks behind the dogs and in front of the sled, the geepole in his hand and the central rope between his feet. He has a whip, but it is seldom used, and then never on the leader. The lead-dog must have almost human intelligence; he is in charge of his team in real earnest, and except on the very rare occasions when he gets into a fight he is controlled only by the voice of the driver, and treated as befits his station.

Clothing for Fifty Degrees Below Zero

Tramping for twenty miles a day over snow-covered country in a driving blizzard, dressed in heavy furs and sealskin boots, is a task that needs to be tried to be appreciated. One day, with a heated house and warm food at its end, would be enough for any of us under ordinary circumstances, but at the poles it is often necessary to repeat the march day after day for weeks, with a mush made of pemmican and an icy tent pitched on the bare snow for comfort at night. The earlier explorers faced this inevitably, but by the use of planes and intermediate bases we hope to avoid some of it.

Some, but not all. Laying the bases will require work with dogsleds; so will short overland exploring trips; so will our forced march, if anything should happen on the way to the pole itself. And our clothing must be planned accordingly. It must be light, and yet warm enough to protect us against blizzards on the ground and the extreme wind and cold of the upper levels of the air when flying. Part of it must be waterproof, particularly our boots, since the surface snow at times melts under the warmth of the summer sun.

In all one hundred and fifty suits and fifty sleeping-bag outfits will be taken. The suits will consist of pants made of reindeer skins with the fur outside, coats or parkas made of reindeer skin, with linings of fawn or squirrel skin with the fur turned inside. Fawn is the term given to the skins of young reindeers, lighter, although less durable, than that from older animals. For my own use I am taking a pair of bearskin trousers that I wore flying over the North Pole. They are heavier, but no warmer than reindeer.

Boots are particularly important. Sharp ice wears them away quickly. Moisture from perspiration, if not guarded against, will freeze the feet. Above all, they must be large enough. Tight boots would lead to chilblains and actual freezing.

Getting them large enough means that space must be allowed for reindeer socks, worn with the fur inside, one or more pairs of wool socks, and possibly one pair of silk. Silk has the great disadvantage of keeping moisture in, not being absorptive like wool or cotton, although it also keeps cold air out.

The soles will be made of sealskin, one of the hardest and toughest leathers known, while the uppers will be of softer reindeer. Between the sole and the foot will be a layer of senna grass, to act as an insulating space between the socks and the boot-sole. This will effectually prevent moisture from keeping the socks wet during hiking. Sweat is a most important factor, for if there is nothing to absorb it, such as the senna grass, it will soon freeze the feet.

Gloves will also be very large, to enable woolen mittens to be worn underneath, and will be made of both sealskin and reindeer hide.

In making up all these garments the rule must be remembered that fur outside keeps the cold out, and fur inside keeps the warmth in. For this reason all outer garments will be of skins worn as the animals wear them, when they are almost impervious to wind and moisture. The inner garments and linings will have fur on the inside, to conserve the body warmth as much as possible.

The reindeer-skin sleeping-bags will be furred on the inside. On the march it will be necessary to sleep in them completely dressed. In this way the fur will often become saturated with moisture during sleep, causing serious inconvenience and even death if a wet bag is used night after night. The dodge that avoids this is a simple one, but not particularly well-known. It consists only in turning the bag inside out, and exposing it to the outside air for a few moments. The moisture freezes almost at once, and may then be brushed away like dust.

Another useful dodge I learned in the

BY *Commander Richard E. Byrd*

What a Polar Expedition Eats

A COMPLETE list of our proposed supplies would fill the whole of this page, even if printed in very small type. Below you will find some of the largest items. They are calculated for eighteen months. Divide the figures by eighteen, and compare them with the amounts used in your own home in the course of a month.

44,000 lbs. frozen meats, including mutton, veal, pork, beef, etc.—4000 lbs. frozen chicken—1000 lbs. frankfurters—2500 lbs. pemmican—assorted cases of hot tamales, ox-tongue, deviled meats, meat extracts, preserved soups and bouillon cubes—1000 lbs. dry codfish—50 pails salt mackerel—700 lbs. fresh fish—260 cases canned fish—salmon, clams, kippered herring, etc.—3000 lbs. butter—3000 lbs. lard—800 lbs. cheese—250 cases condensed or dehydrated milk—150 cases eggs, in powdered or dehydrated form—20,000 lbs. wheat, graham and buckwheat flour—1500 lbs. cornmeal—2 bbls.

Swedish health bread—25 cases pilot bread (hard-tack)—4000 lbs. assorted cookies and crackers—14,000 lbs. granulated, brown, maple and confectioners' sugar—500 lbs. assorted candies—17 cases fresh lemons, apples, oranges and grapefruit—80 cases preserved peaches, pineapples, cherries, plums, grapefruit, etc.—5000 lbs. dried fruits—20,000 cans assorted vegetables—5 bbls. sauerkraut—780 bushels potatoes—8000 lbs. fresh and dried onions, cabbage, turnips, carrots and spinach—4000 lbs. dry navy beans and peas—2500 lbs. coffee—200 lbs. tea—200 lbs. cocoa.

This list is only tentative as yet, and may be very greatly altered before plans are finally completed. It will, nevertheless, give you some idea of the great complexity of provisioning a polar expedition.

Arctic. Often on sled trips a sudden blizzard comes up which must be weathered without putting up tents. The method is simple; crouch in the snow so that the edge of the parka touches the ground, and bank up around it a layer of snow, to keep out the wind. The fur hood is pulled closely about the face, and the hands placed Chinese fashion in the long unrolled sleeves of the parka. In this way it is possible to sit out in comparative comfort a blizzard that might otherwise be almost fatal.

In addition to the fur hoods, some sort of mask may be used when flying and in high winds. Colored glasses that filter out the rays of light causing snow-blindness will be standard equipment for everyone, protecting the eyes against wind and blowing snow as well.

For repairs to clothing one hundred and nineteen reindeer pelts will be taken, fifty of them being young fawn skins. Martin Rönne, sailmaker on Amundsen's ship the Fram, will have charge of all repairs to clothing and tents. Besides the parkas, boots and trousers, he will have socks, moccasins, ski boots, wool waterproof ski-

suits, Burberry wind-breakers, heavy underwear, and dozens of other articles of clothing to look after.

Food, clothing, fuel, planes, dogs and men will take up most of the Samson's limited cargo capacity, but in the odd corners will be stowed ukuleles, banjos, guitars, saxophones and other stringed instruments, a small studio piano, outdoor sporting equipment, a portable motion-picture outfit and assortment of reels, and paraphernalia for the usual indoor games. There will be rifles, shotguns and ammunition for target-practice and sealing, and a great number of books. With these the monotonous routine of a possible winter on the ice will be made more bearable.

The Man Power of the Expedition

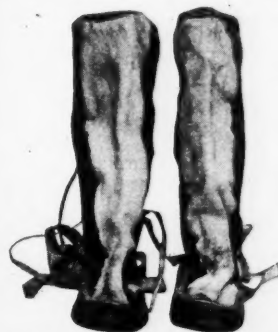
In the final analysis men form the real backbone of any expedition. Our preparations, both in thought and materials, have been as thorough as possible, but all of them can be knocked into a heap by some failure in personnel. I anticipate none, but it is a hazard for which there can be little preparation and no defense.

There will be no failure in morale. The men who will comprise the expedition all possess the necessary qualities of mind and brain to endure the long strain of polar work, the loneliness, hardship and danger. They have been chosen not only for what they know and can do, but for what they are. There is no room here to go into all the complicated details of their selection. Let me only say that the finest pilot or scientist in the world would be less than useless if he had not the quality of keeping up his own morale under strain, and of helping others to keep up theirs.

[CONTINUED ON PAGE 406]



Above—C. E. Lofgren (right), supply officer of the expedition, inspects one of the tents with Harold I. June. Below (right)—Sledging across the floes; a good example of the difficulty of some polar travelling



Upper left—The sealskin boots which Commander Byrd will wear. Lower left—Commander Byrd's sealskin mittens. Note their size compared with a pair of men's ordinary gloves



THE DERELICT

By Charles Nordhoff

ILLUSTRATED BY COURTNEY ALLEN



A moment later I opened my eyes—there was the turtle, above me and just ahead

[PAGE 380]

CHAPTER TWELVE The Day's Work

THE events of the night had dispelled all thought of sleep. While we waited by the house for the others to come, Fatu busied himself in kindling a bonfire on the beach. I sat a little way off in the moonlight, a prey to nervous reaction and depressing thoughts. Staub's cold-blooded killing and his own death had shocked me profoundly; we were safe now from his mania, but our company of nine was reduced to five. Our task—short-handed as we were—was to build some kind of vessel and get away from Iriatai. I thought of the Sumbawa. We had her, anyway; the only pleasant news I should be able to give Uncle Harry. But why he or anyone else should take so much interest in a small derelict steamer with a cargo of machinery I could not understand. Fatu's voice brought me out of my reverie.

He was standing knee-deep in the lagoon, twenty yards away. "Come and help," he called; "there are plenty of clams here and I have a fire going. If you will help me dig them, we shall have a meal ready when the others come."

I rose and waded out to him. The bottom was sandy at this place and thickly inhabited by the shellfish the natives call *kahi*, which look very much like clams and are quite as good. We worked our bare toes into the sand, feeling this way and that, and when we came on one of the little colonies of clams we scooped down to dig them and tossed them ashore. In half an hour we had enough for a dozen hungry men.

Nothing could have been simpler than the way we cooked our meal. We were still eating when we heard a hail and saw the canoe approaching, guided by the glow of our fire.

Lem, in the bow, was the first to step ashore. He sniffed; his eye took in the pile of clams and the fire, and before he spoke he set a dozen of them on the coals. "Too much hungry!" he said. The natives, who have an enviable capacity for tears and laughter within the same half-hour, were in high spirits. Fatu was forced to tell every detail of the night's happenings, while they chattered, exclaimed and cooked batch after batch of food.

As he finished his story Fatu reached out gingerly to take a roasted clam off the coals. Dawn was brightening the east. Presently, one after the other, we strolled across to the house and lay down on our communal bed of leaves to sleep.

IT was early afternoon when we awoke and made another meal. As we lolled about the fire, with a pleasant new sense of security, Fatu showed his fitness to command. He had been awake longer than the others, and he must have been thinking over our situation.

"Listen, all of you," he said; "we must get to work now, and I will tell you what to do. Our task is to build a sailing-canoe big enough to take us to Tahiti. Its length will be four fathoms, or four and a half; it must be strong, light and able in a sea. We shall need the five pieces of the hull and sinnet cordage to lash them together, the mast, the boom and wooden stays such as old-time folk of the Tuamotu used. The sail will be of pandanus matting. Now to divide the work so that each man will have the task he is fitted for. Do you, Fahuri, take the Chinaman and make our sail and cordage; you understand the work of our ancestors better than I. Marama and I will cut out the hull and the paddles. Tehare, our white boy, is not accustomed to Maori work, but there is no better fisherman among us; let him, if he is willing, provide us with food so that we can have all our time for other work. What do you say to my plan?"

Fahuri answered with an emphatic nod. Like other old men, he lived much in the past, and his opinion of the younger generation was not favorable. "You do well," he remarked, "to leave the sail-making to me. I can remember when we had no other sails but those of matting, and the sails we made were not like the poor coarse mats the women weave today. But you will see. As for cordage, I can soon teach Lem the art, which requires patience rather than skill."

Fatu smiled at his old friend. "Good! It is settled, then. Why not take Lem and start this afternoon? I am going out to the sunken ship with Tehare and Marama to see what we can find."

We launched the canoe—the three of us; Fatu took his place in the stern, and Marama

and I paddled with the butts of coconut fronds. The sharp narrow little vessel flew over the lagoon, leaving a track of foam. It was not yet midafternoon when we drew near the Sumbawa, where she lay in eight or nine fathoms of water, a little south of the islet.

The sun was hot, and there was not enough wind to ruffle the landlocked water of Iriatai Lagoon.

The top of the derelict's funnel was not quite awash, and her two thick stumpy masts rose a few yards into the air above. Somewhere in the frayed and tattered standing rigging Staub must have taken refuge when she went down, and remained there until the sea was calm enough to allow him to swim to the islet. As we passed over the sunken hull, I could see the top of the bridge and the chartroom close to the surface. Fatu was making ready to dive. We floated close to the foremast, and I had a hand on a rusty stay.

"Wait for me here," directed Fatu as he lowered himself into the warm water.

Craning my neck over the side and shielding my eyes from the sun, I watched him pull himself down the stay to the level of the deck and swim off deliberately among the purple shadows. Presently, after what seemed a very long time, he reappeared, rising with slow graceful movements of arms and legs. His head broke water alongside, and he expelled his breath with the pearl-diver's shrill eerie whistling sound.

"I am afraid there is not much of value to us," he said as he rested with a hand on the gunwale; "here, take this; we can heat it in the fire and use it for piercing holes." He held up a badly rusted marlinspike. "We shall never be able to get the main hatch off," he went on; "the cover is of heavy canvas, and I thought it might save us the labor of making a sail, but it is so rotten that it fell to pieces in my hand. Now I am going down again." He grinned at me, drew a long breath and seized the stay once more.

Somewhere on the Sumbawa there must have been things we needed badly—axes, saws, nails and food in tins. But, though Marama and I took our turns at diving and explored as much of the ship as we could, our only finds were a coil of light rope in good condition and a heavy hinge Fatu managed to wrench off a door with his axe. It was of some white rust-resisting metal, and the skipper thought it might make an adze.

Perhaps our explorations were not so thorough as they might have been; if the others felt as I did, they were not sorry when we gave up the attempt. To open a door and swim into a room fathoms deep under the sea is an experience I do not hanker to repeat. When we paddled away homeward, the sun was low in the west.

NEXT morning Fatu sharpened his axe and set to work to fell the great *ati* tree close to the house. Using the axe as a cold-chisel and pounding it with a stone, he had cut the hinge in two, and now Marama was grinding and shaping the bit of metal to make an adze. Fahuri and Lem were busy husking ripe coconuts and putting the husks to soak in the lagoon while they made a stack of the nuts themselves. I made a clumsy basket of bark and set off in the canoe.

Fatu had put me on my mettle when he proposed that I keep our camp supplied with fish; I have always loved fishing and prided myself on what little skill I possess. But our two fishhooks were lost when Staub opened fire on us on the reef, and, though I had hoped to find at least a nail or two on the Sumbawa, I had had no luck. For the present I should be able to get shellfish in abundance and to spear with a pointed stick the little rockfish in the pools, but it was not until later with hooks made from pearl shells and line from *orongi* that I had any way of catching the larger fish all hands preferred.

The morning was glassy calm. I was making for the stretch of reef which separates Koro from Ragi, where I thought the shellfish would be plentiful. Suddenly, fifty yards ahead, the back of a small turtle broke water. I ceased paddling; the canoe drifted at slackening speed and stopped. The turtle lay basking in the morning sunlight. His head was away from me and his hind flippers—*sumure*, the natives call them—moved gently and contentedly. I was close enough to see the rough serrations of the shell, which told me that the turtle was of the hawkbill variety—rare in these seas. No faintest breath of wind was astir. I laid down my paddle noiselessly. Then, with the utmost caution, I lowered myself into the lagoon.

Swimming with long, slow strokes, I approached within ten yards before I dived. A moment later I opened my eyes—there was the turtle, above me and just ahead. A single stroke sent me to the surface; I crossed my arms, seized a hind flipper in either hand, turned the turtle over and held him easily, in spite of his clumsy struggles. Turned upside down, turtles are nearly as helpless in water as on land. I had cut a bit of the Sumbawa's line as a painter for the canoe, and when I had piloted my captive alongside I made fast to a flipper, released him and hove myself aboard. He paddled frantically, but he was too small to tow the canoe at any speed, and when I had let him run a little I hauled him in and laid him in the bottom, upside down. The hawkbill turtle is very different from the big green edible turtle of the South Seas; he grows to less than one-half the size, and the thick plates of shell on his back furnish the pretty material we call tortoiseshell. Those turtles were once plentiful, but their value nowadays causes them to be pursued relentlessly wherever found. This one was about twenty inches long, and from what I had heard I knew that he would fetch thirty or forty dollars in any civilized place. It was noon when I returned to camp, to receive congratulations on my catch.

I WISH I had space to tell more of the building of our canoe. I can claim only a small share in the achievement, for I was busy with my fishing and could only lend a hand during odd moments of leisure now and then.

Everyone who has read Captain Cook's

A QUICK SUMMARY OF WHAT HAS OCCURRED IN EARLIER CHAPTERS

RANCH life for young Charles Selden is suddenly interrupted in 1916, while the Great War is raging in Europe, by the necessity for setting sail from San Francisco for Iriatai, a South Sea island, with a native crew in the French-registered schooner *Tara* to guard the business interests of his uncle, who has been temporarily stricken with tropical blindness. Once under way, Charlie finds a strange note in the ship's safe from his uncle, telling him that a derelict, the *Sumbawa*, is afloat somewhere in the waters through which he will probably voyage, and that the British Admiralty is anxious at all costs to discover her. He warns Charlie to keep a sharp lookout.

A ship which the *Tara* sights turns out to be a skillfully camouflaged German raider, the *Seefalke*, which has found her way into the Pacific. Her commander is forced to sink the *Tara* because of her French registry, but Charlie and his crew are taken aboard the *Seefalke* and treated with great consideration by Count von Arnst and all of the crew save Hochbootmann Staub, the boss—a villainous and apelike man. Von Arnst announces his intention of putting the *Seefalke* in at Iriatai and clearing her of barnacles. Close by the entrance to the Iriatai Lagoon the *Seefalke* sights the *Sumbawa*, and at Charlie's urgent pleading Von Arnst tells her in the hope that he can use some of her machinery and oil. With regret, Von Arnst tells Charlie that he must

maroon him and his crew as a measure of war. The very night of landing, however, a storm springs up which turns into a terrific South Seas hurricane. The *Seefalke* and most of her crew vanish forever in the storm. Her few survivors leave the island later in a small boat. Charlie, together with Fatu, the master, Marama, the mate, Fahuri, the engineer, and the rest of the crew survive the terrible night by clinging to the palm trees.

When the storm passes their first concern is to find food and make fire and to build some sort of craft with which they can hope once again to reach civilization. Tragically suddenly descends, however, for Hochbootmann Staub, far from meeting death in the hurricane, weathered the storm in the *Sumbawa*, which sank in comparatively shallow water. Almost before Charlie is aware of his presence, he has shot and killed the cabin-boy and one of the seamen. His motive is so far unknown. Charlie believes that the boss has become insane, but in this he turns out later to be wrong. Charlie and Fatu set out to capture him, and in the encounter Fatu has a terrific battle for his life, which ends only when Staub's heart, overtaxed by fury and excitement, gives way.

Shaken and terrified, Charlie and his fellows redouble their efforts to build a craft which will take them back to civilization before some further tragedy shall overwhelm them.

voyage (and those who have not had better hasten to read one of the most interesting books ever written in English) will recall the great navigator's visit to the king of Tahiti's shipyard, and his astonishment as he inspected a vessel over a hundred feet long, just completed with native tools.

Neolithic man, with his implements of polished stone, made up in skill and patience what he lacked in tools, and the modern Kanaka, only three or four generations removed from the stone age, has preserved some portion of these ancestral qualities. Fatu, Fahuri and Marama, at any rate, with their clasp knives, a single axe, and a crude adze made of a bit of sharpened hinge lashed to a crooked stick, built and rigged in less than five months' time a sailing-canoe I wish I owned today.

She was about twenty-five feet long and three feet beam. Her underbody—I can think of no other word to describe this part of the hull—was made of the hollowed-out trunk of the *ati* tree. The freeboard was built up with specially shaped pieces hewn out of large trees for bow and stern, and a pair of planks to make the gunwales—an inch thick, a foot wide, and twenty feet long. The underbody was hollowed out partly with fire and partly with the axe, but the other four sections of the hull were made by sheer hard work and patience. The two long planks involved an amount of work staggering to contemplate; each was rough-hewn from the heart of an entire tree and brought down to thickness with axe and adze. Finally, when all was as smooth as the adze could make it, Fatu and Marama set to work with bits of coarse cellular coral—rubbing and smoothing till the wood seemed to have been sandpapered inside and out. Then the parts were assembled and the work of fitting began—at first with light glancing blows with axe or adze, then with knives used like spokeshaves, and finally a patient rub, rub, with the coral, till no ray of light showed through the seams.

When all was ready, and even Fatu's critical eye was satisfied, the marlinspike was heated in a fire of coconut shells and the holes for lashings were pierced in pairs, above and below the seam. Lem had mas-

tered the art of sinnet-making long before this, and, working with Chinese industry, he had turned out many hundreds of fathoms of the strong elastic native cord, plaited in three, exactly as women braid their hair. Coconut sinnet stretches like rubber, and when lashed under strong tension it will not relax for a year or two.

They began one morning, and when I returned from fishing that night I found the stern-piece and the two gunwales lashed in place—so firmly that the canoe seemed hewn out of a single piece of wood. The gunwales were braced crosswise with thwarts, and when the bow-piece was made fast to the underbody, and the four short vertical seams strongly closed, Fatu and Marama plugged the holes with bits of soft wood and gave the seams a final caulking with resinous *ati* gum. The little vessel, with her high sharp bow and graceful line of sheer, was pleasing to the eyes as she stood propped on a pair of logs. When her mast was stepped and her outrigger in place she would be ready for the sea.

EARLY in our stay on Iriatai I thought of keeping track of the days by cutting notches in a tree, Crusoe-fashion, but I soon found that my companions—in some automatic way which was more or less of a mystery to me—always knew the date and the day of the week. They kept track of time in order to observe Sunday, I suppose, for they never worked on Sunday. How deeply our religion had penetrated their minds I cannot say, but I know that they believed in God and in the rewards and punishments of a future life, and that they kept the Sabbath as rigorously as any Puritan. We slept late on that day. Sometimes Marama and I went for long walks or swims in the lagoon, and old Fahuri, who had a weakness for good food, spent his Sunday mornings in preparing a little feast for all hands. Lem was the only one who worked, pounding and scraping his fiber tirelessly, or sitting on the sand in a shady place, braiding the sinnet held taut between his naked toes. He never seemed happy unless his hands were occupied; on the Tara, when the dishes were washed, the galley tidied and the cop-

pers shining like burnished gold, he used to invent new tasks for himself. Lem's dislike of idleness was quite as pronounced as the feeling most of us have about steady, monotonous work.

My own work, during these months on Iriatai, could not have been more congenial, and the fact that all the fish I could catch would be eaten with relish by my companions made the sport doubly enjoyable. There is an infinite variety of fish in Iriatai Lagoon and in the sea outside the reefs, small and large, fish with dark flesh and white flesh, some light and delicate enough for an invalid, others providing rich, strong food for active men. Knowing something of the different kinds and the methods of catching them, I did my best to vary our diet from day to day.

The natives, before the white men came to their islands and gave them new ideas, recognized no weeks or days of the week. Their year was regulated by the appearance of the stars, and their word for year—*matahiti*—means "rising of the Pleiades." Their month was the lunar month of primitive men all over the world, and the Polynesian word *marama*, like our own month, means simply a moon. And instead of learning the names of the seven days of the week, as we learn them in infancy, the native child had to learn the names of thirty days from new moon to new moon. A knowledge of them was essential, for they regulated all fishing and all work in the plantations; and as far as fishing goes, I can vouch for their usefulness.

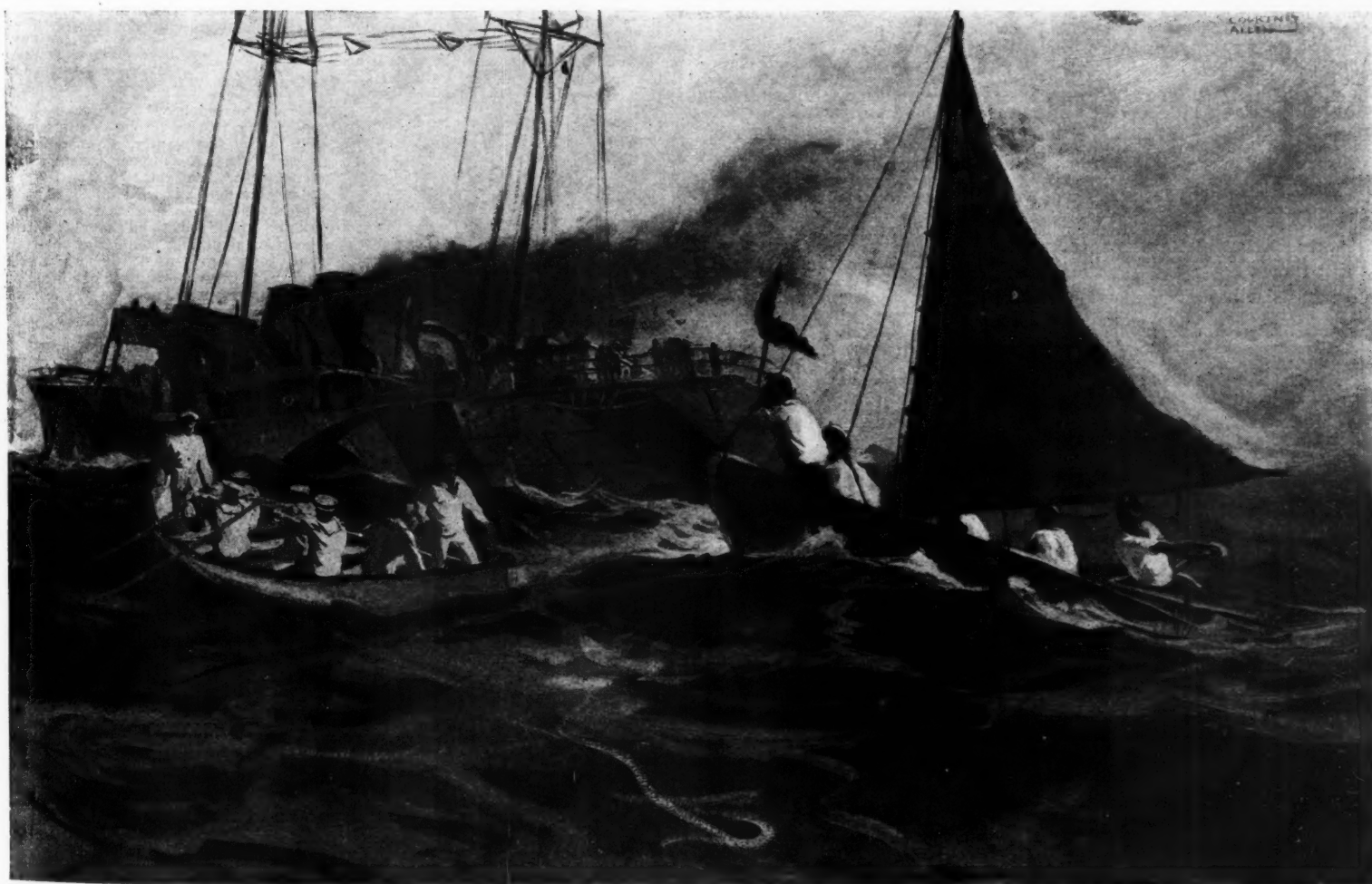
On certain days of the lunar month, for example, it is wholly useless to gather shellfish or crustaceans of any kind, for they lose weight at these times till there is nothing on them, or in them, to eat. Then there are nights, recurring regularly as the moon itself, when certain kinds of fish seem to go mad and lose all fear of hooks and nets; and there are three nights each month—full moon, the night before, and the night after—when the land crabs emerge in thousands from their holes and wander about in companies, so tame that one can pick them up. My uncle had taught me something of these mysteries, and now old Fahuri refreshed my

memory, helping me to work out a little schedule which would inspire success. One day he suggested that I try for *mara*—a huge blue fish of the wrasse kind with scales as big as a man's ear. In the old days, when they enjoyed their sport of archery, the island chiefs shielded their left arms from the bow-string with mats of these great blue scales.

"You have never tested the *mara*?" Fahuri asked. "No? Nor I for twenty years! He bites when the moon is at the full, as it is now, and then his flesh is white and sweet—ah, my mouth waters at the thought of it! Shall I tell you how to catch him—an art dead among my people today? Go out in the morning when it is calm, and paddle along the face of the coral, where it shelves off steeply into blue water. Look down carefully as you go and presently you will see the head of a *mara* peeping out of the hole where he spends his life. You will know him at once by his color and his size. Take two things with you—a stick three or four feet long, and a few land crabs pounded up in bits. Crabs are his food—he will take no other bait.

"When you have located your fish, make the canoe fast to the coral, take a handful of crab, swim down under water and poke it into the hole with the stick. You will not see the fish, but presently he will look out again, see what you have left, and eat it. Do this three or four times, till he becomes tame, and remember not to hurry, for he chews his food like a man. Then, when he has become accustomed to you, bait your strongest hook, swim down with it and push it into the *mara's* hole. Give him plenty of time once more; he will not feel the hook till you tighten the line. Get into the canoe and paddle away from the shoal, slacking out line as you go, and when you think he has the hook well in his mouth heave, and heave strongly! The *mara* will try to turn and retreat into the depths of his hole; if he succeeds, you will never be able to pull him out. Your only hope is to get him out of the hole at the first pull, which will take him by surprise; once out he will rush away into deep water, where you can play him till he is tired out."

[CONTINUED ON PAGE 392]



With powerful sweeps of the paddle, Marama kept the canoe hove to while the boat from the *Regulus* was lowered and pulled back to us. Now the boat pitched and tossed alongside, and the young officer hailed us. "What's the matter?" he called, above the hurly-burly of the sea [PAGE 398]



The heart of a broadcasting station; the 32 new tubes which form the most important part of the transmitting apparatus at Station WEAF, New York City. This picture was taken in the testing rooms

SOME time ago I wrote for you a series of articles on "The Boys Who Made Radio." This year the "boys who made radio" may make a President.

You will remember them—Guglielmo Marconi, who began his inventions in the field of wireless when he was seventeen; Lee De Forest, who learned his first lesson in electricity from *The Youth's Companion*; Edwin H. Armstrong, who was an unknown Columbia student when he startled the world with his "regenerative" radio set; and those other young men, like David Sarnoff, of the Radio Corporation of America, who have developed the business side of radio.

It is the instruments they put together in long years of hard work that will elect our President this year.

Only a few years ago radio was regarded as a scientific toy. Today it may prove to be—indeed, many people think that it is—the most potent political weapon ever placed in the hands of men.

In the little "city nations" which were great in ancient days a Pericles or a Caesar could speak to almost all the voters; and, incredible as it would have seemed a few years ago, the day is not far distant when a President may do just that in this country which is three thousand miles across and nearly a hundred and twenty millions big. Thanks to those "boys who made radio," Presidential candidates this year can speak to nearly thirty millions at once; already President Coolidge has done that.

I say that this is an amazingly important thing to have grown in a few years from boyish experimenting, and that the story of what has happened to radio lately is as much *your* story as were the stories of the boys who first invented radio, then built sets and have sold them already to seven million homes.

"Magazine of the Air"

The radio network or chain or hook-up has been enlarged since the last campaign, and has been more and more "commercialized." The radio network now considers itself to be a "Magazine of the Air."

Some years ago WEAF, the biggest station, as regards hours, program and power, was costing the Bell telephone system \$300,000 a year. An experiment was begun, selling space on the air. The experiment was commercially successful and soon paid for the upkeep of the station.

At about the same time there were experiments in radio relayed by wires. KDKA of Pittsburgh, for instance, sent its program over standard wavelength, and simultaneously the same program was sent over a short wave, to be picked up by certain other stations and rebroadcast by them over their standard wavelength. The short waves were for distance. But it wasn't good enough; we do not know enough yet about short-wave transmission.

Then, experimentally, WEAF hooked up a "chain" by land wires; a dozen stations was the original plan. WEAF said to the Middle West station, for instance: "We will give you metropolitan programs, by the greatest artists and entertainers"; and to

the national advertisers: "We will carry to many millions scattered over the country the program with which you wish to advertise your product."

Contracts were signed with the smaller stations and with several advertisers, and the first "Magazine of the Air" had started publication. It contained advertising pages—that is to say, advertisers bought "space on the air"; and it contained other entertainment or informative "pages," or hours, filled by the "publisher"—in this case by the vast program facilities of WEAF.

Three such networks as this exist today. Linked in these networks are sixty stations, and within a hundred-mile range of these stations are eighty-three per cent of the radio sets owned in the United States. That is the machine ready and waiting for the political battle of 1928—and all of it trails back to boys' workbenches. You can feel proud of that!

We have now seen the "front office": let us step back into the mechanical department. The backbone of the radio network is the copper wire that can be located in all the uncountable strands owned by the American Telephone and Telegraph Company. A wire which will carry a telegraph message is not good enough; that can swing and sway and hum, with only a slight interruption to the clattering Morse code. A telephone wire, merely, isn't good enough, though that must be better than a wire used for Morse code only, since voice vibrations are of a much more intricate pattern than the dot-dash of the telegraph key. Not even the crack "trunk line" wire, which by some alchemy has been "doctored" electrically to carry several phone and telegraph messages simultaneously, is good enough for radio use. The essential reason is that a great symphony orchestra is a thing of so much greater range of vibration frequencies than the speaking voice.

The wire which connects the radio stations of a chain must be specially tested, electrically "balanced" by various delicate mechanisms, and specially tended by very expert electricians. It must be fitted with delicate "repeater stations," and with a second wire over which Morse messages race, telling of wire and weather conditions along the way and giving orders for the management of the wire system and sometimes of the broadcast program itself.

The essential element of the "repeater" is familiar to you. Long before you ever saw a radio tube hundreds of them stood sentinel over our land lines. When Dr. Lee De Forest invented the audion tube, and for many years afterward, there was no broadcasting use for it, because there was no broadcasting use for it, because there was no strand of copper wire, and when the electrical vibrations carrying your spoken words had sped along a wire so far that they were almost dying of exhaustion this tube, or repeater, picked them up, amplified, and sped them on their way. Bell laboratories improved the original tube, and it made cross-continent telephony possible. Enlarged, it stands sentinel now at frequent intervals along the copper strand of the radio network.

RADIO IN POLITICS

How and why it will decide the Presidential election this year

By Earl Reeves

With this kind of preparation, a switch is closed, and over thousands of miles of wires, into a score of broadcast stations and through the air to millions of listeners, goes the miracle of distant electrical reproduction of a philharmonic concert or a Presidential campaign speech.

Not even the miraculous vision of the boy Marconi could have foreseen all this. Nor can men today forecast precisely what all this will mean to us—or, more particularly, to the generation of boys and girls now reading *The Youth's Companion*. However, after making a considerable investigation, I am going to hazard a few general forecasts.

White House and be a better President than most—because he thinks and works, although he cannot orate. In other words, the field from which the voters will choose broadens.

Three: A lot of the stuff you dig out of books in your "civics" or "government" class is going to come casually off the radio in your living-room at home, to be talked over by the family. In fact, this is already happening. A "business meeting" of the government of the United States, with the President as chairman, has been heard by millions, via the radio.

Four: We used to vote pretty much as our fathers voted. If radio gives us more facts and less of what boys are likely to call "blah," I suspect that a lot of you who read this will make up your politics out of your own heads, so to speak, and decide your political convictions for yourself. If I'm right about that, it's bad news for the "bosses"; or maybe you know already how much they fear what they call "the silent vote"—composed of those persons who say little, think things over and vote as they think.

Five: There is pretty good reason for a belief that radio will help actually to "enfranchise" girls now growing up. Their mothers got the franchise several years ago, but they do not vote in overwhelmingly large numbers. They "know nothing about politics," they say. Facts of government continually pouring into the home will leave girls approaching voting age no cause for saying, "I know nothing about politics."

Six: You ought to have a better chance of getting good government than your fathers and mothers had. If politicians cannot pull the eagle's tail and otherwise drug your reason while appealing to your emotions, they will be compelled to come out in the open and lay hard facts before you. Crooked contracts and graft do not flourish in the open.

The Promise of the Future

Enough of prophecy! You now have the opportunity to test it out. Years ago we used to say, inelegantly, when making a forecast, "Paste this in your hat and see if I am not right." I say this to you now. Try it, and in a few months see if I am not right.

Meanwhile, remember that some boys, tinkering, made radio, and that this "little" invention, plaything, medium of entertainment, long ago ceased to be a merely mechanical thing. Already it has lifted our musical tastes; it is giving us new kinds of education; and this year it will be an all-powerful thing politically.

Remember that at your workbench or in the laboratory—and go on experimenting! No one knows where it may lead. You yourself may have no idea of the importance and usefulness of the things you are doing. Only time can tell.

Some Changes It Will Make

This use of radio for political campaigning is going to make some changes in methods of teaching "public speaking" in your classroom or debating society—because it is going to change our conception of what eloquence is. Already the radio has proved that what we knew as "oratory" no longer is true eloquence. Verbal flourishes and wild gestures have been on the decline for some time; radio almost delivers them a knockout blow. When I was in high school, my friends and I had to "reverberate" a bit in our "Senate." I learned then that I should never be an orator—not that kind of an orator, at any rate. We are learning now, however, that an earnest, simple, reasoned "talk" is infinitely better and more effective than the old-fashioned type of speech, filled with fancy rhetoric and bombast.

Again: This is going to make one of our country's finest traditions nearer true. We like to hug to our secret breasts the thought that in the United States *any* boy may grow up to be President. But actually we have known that this is not true. If he didn't have a little of the oratorical gift Patrick Henry had, why, he might as well



Keystone Photo

President Coolidge addresses thirty million people through the medium of a microphone. On right, the control operator of WEAF during a great national broadcasting

count himself out of the running, early. This is lightly put, but it is very important. Somewhere among you is a hard-working, brainy, silent boy who couldn't make a "speech" if his very life depended on it, but who will one day sit in the



"OH, YOUNG LOCHINVAR!"

By Holman Day

ILLUSTRATED BY GAYLE HOSKINS

IT had rained all day, a copious June downpour. Director Katon, of the Forest and Field Motion Picture Company, was barred from his makeshift lot by the weather. Caged with his wife and other actors in the Comas village on this rainy day, he stood moodily watching a checker game. Then he strode into the inn parlor, where Mrs. Katon—known on the screen as "Vera Astaire"—was also trying to kill time.

"If you weren't so cross today," said the lady, "I'd favor you with a dandy plot for a story."

No answer from the disconsolate Mr. Katon. He looked out of the window, wishing the rain drops would stop falling. Suddenly his mood changed, and he called out in loud admiration of what he beheld—a boy galloping a nimble riding-horse down the village street.

"It's that Orman Rowe, the young chap who has been helping us in pictures," he said. "That's some nag, and the young fellow sure can ride."

"All right," said the helpful wife. "We can cast him and the horse for a rescue or a chase. I think there's too much fist fighting in our comedies, and everybody knows before the fight begins that the hero is sure to whip everybody in sight."

"Yes, and you can bet the hero will never be trimmed in our pictures—not while I write the stories and play the hero," said Author-Actor-Director Katon, cheerfully.

"Tom," said his wife, slowly, "you're making a noble struggle to stay young and look young. But it must strain your mind to think up all those hero stories, day in and day out, so that a middle-aged man like you, wearing a toupee, can get by with athletics and young-love interest. Suppose you let somebody else play hero for a change."

"Yes, and what about you?" replied her spouse, bitterly. "Say, Poll, I have to play you out of focus in close-ups, as it is, to favor your mouth lines."

Mrs. Katon deepened those lines by making a face at him. They were not truly annoyed at each other; they both knew that middle age was coming on apace, and both secretly wished it were not necessary forever to be acting eternal youth.

"Well, now," said Mrs. Katon, relaxing, "here's the next story for us." She shook an open book under his nose—a volume with rusty covers. "That boy outside on the horse is just the type for the hero."

"What's the book?"

"Poems!"

"Take it away!"

"I will not. It's great stuff, Tom; a thrill to every page."

"Who wrote it?"

"Sir Walter Scott."

"My land!" said Mr. Katon. "You're shooting worse, Poll. There's only one thing in favor of anything like that—the book's so old we can use it without getting tripped for royalties. However, nothing doing!"

"Suppose I tell you the story, Tom. Forget it's a poem and who wrote it. You see, here's a big fashionable wedding going on, and the hero rides through the river on horseback, and just when the party is breaking up he—"

"Not so rotten, not so rotten," said Mr. Katon, grudgingly. "I see some chances for action. But I don't ride very good."

"Who," asked the lady, "said you were going to ride. The riding will be done by Orman Rowe, and we'll pick some smart, slim young girl in the village for the bride."

"All right," said Mr. Katon, after a



With the same snap of action he secured Holt's legs with another noose

thoughtful pause. "Maybe it'll go good, if we jazz it up enough. How does the end come out—if it isn't a happy ending we'll have to change it to one, of course."

"Oh, it ends O. K.," Mrs. Katon assured him. "The boy gets the girl all right. Now, we need a big house for a castle, and some extras,—husky chaps,—brothers and sisters too, for the party—and some retainers. There were always lots of retainers in the old castles."

"It won't be a castle," said Mr. Katon firmly.

"Oh, Tom. You know I'm coming along great with my glass work, and I'd just love to paint a castle scene."

She was referring to a device that has been surprisingly successful in producing grand effects. On a square yard of glass, with a rectangular section cut out of the center, the artist paints whatever scene is required—mansion or street or palace hall. At a distance beyond the glass is set up the practical scene required for action by the characters. Then the camera lens, located a few feet from the rectangle, blends painted glass and practical scene with actors into a consistent whole.

"No, ma'am! No castle! We'll shoot the scene at that old house up in the Brettun clearing—call it a smuggler's den on the border. The forced marriage is between smuggler chief and a father who's after the crooked business. I'm the brave revenue officer killing two birds in the affair—break-

ing up the gang and seeing to it that my young brother gets his true love. You're the bride's sister,—only a little older,—and I'm in love with you. You live just over the line in Canada, see? When the clean-up is made, I have your father break with the gang. Then there's a double wedding that same day—we join up with Locky and the girl somewhere. I'll be thinking that out later. Only you and I don't go on horseback! However, it'll be a pippin! Snappy action! Hardly a subtitle needed! Hah!"

AT that moment he glanced out of the window and made a break for the door. Orman Rowe was returning from the village, and Katon had caught sight of him.

"Say, son, I've got a part for you in the next picture. Corking part!" Katon caressed the horse's topknot. "You're to rush in and grab a girl all toggled out in her wedding dress, standing up with a man and ready to be married to him. You lug her out, jump on your horse with her, and gallop for a get-away. Of course, the girl must have some spryness and grit of her own. How about your getting some nimble, slim lass in the village?"

Orman flushed. There were listeners. A group of young men, loafers for the day on account of the rain, had gathered under the roof of the inn porch. They cackled hilariously and one said, "This is where Actor

Rowe gets a movie job he hadn't ought to ask any pay for doing!"

"Mr. Katon, my horse is nervous, and I don't believe he'll stand for a double load," the young chap protested.

"Hi, there, hoss, give him the laugh!" jeered the group's spokesman. "He's passing you the buck about being nervous."

Orman stared at the youth over Katon's head and narrowed his eyes. "That'll be about enough from you, Barry."

Katon added his own word, too, to stop more provoking sarcasm. But he broke off in telling

the cowed loafers what was what. A girl was walking past the tavern, evidently taking advantage of a let-up in the storm in order to do an errand at the store. Impulsively Katon called to her, and she came to the porch.

She was a village miss who, like many others in Comas, had appeared before the camera in barn dances which had furnished background and relief for strenuous action in several pictures. Director Katon snapped promptly to the point.

"Miss Alice, you're just in the nick of time. Let's see, I've never given you a real part, eh? Here's one for you. You play opposite Orman. Young-love interest—almost star parts for both of you. Are you on?"

With delighted alacrity, showing no embarrassment, she promised, "I'll do my best in anything you give me to do, Mr. Katon. I'll be so glad to have a real part in a picture."

"That's the word, Miss Alice. And it's a real part, all right. Was just telling Orman, here. Lochinvar stuff. You're rescued like the girl in that poem. Do you know it?"

"I do know! I've recited it lots of times. It'll be perfectly fine, won't it, Orman?"

"Yes," he acknowledged without enthusiasm, staring again at the jeering youths and doing his best to give them the danger signal.

But one of them, a burly young fellow, stepped away from the others, advancing. "Hold on a minute about this thing! It might just as well be known as how I'm

keeping company with Alice Austin. And I ain't standing for love stuff with any other fellow."

Now the girl did show embarrassment along with the vivid indignation which colored her cheeks. "How dare you speak out in public like that, Wes Holt? We're not engaged nor anything like it."

"Well, we're going to be," he insisted doggedly.

Katon pushed in, for his own purposes and to shield the girl in her manifest distress. "Look here, Holt, you young idiot, what do ye mean, blatting all this in front of listeners? We're only talking about acting in a picture. If Miss Alice is willing to take the part, she shall have it. I'm boss in that line."

"I do want the part," she insisted, almost sobbing.

"That settles it," stated the director. "This storm is breaking, and we'll have sunshine tomorrow. Report early at the old house in Brettun clearing, Miss Alice. I remember you had a pretty white dress at the dance. Wear that and fix up a long veil."

"I'll be on hand—and I thank you awfully much, Mr. Katon." She ran away toward the store.

Holt bristled up to Katon, who waved him aside. "Got no time to fool with you!"

"Well, I'm going to have business with you from now on—and it won't be fooling, either. This ain't the first time movie companies have tried to bust up things between a fellow and his girl. But it ain't going to be done to me. I'm warning ye! I'll be at the Brettun clearing tomorrow—and we'll see!"

"If you butt in there to make trouble for my company," stormed the director, "you won't be seeing anything, not after I have closed both eyes for you. That's a warning, too."

Katon whirled and went into the inn.

Young Holt shot forward and clutched on the bridle rein of Orman's mount. "D'ye think you're going to play movie masher with my girl and get away with it?"

Orman leaned toward Holt from the saddle and pointed at the restraining hand. "Before I answer you, Wes, you take your hand off that rein."

Grudgingly Holt obeyed.

"Now," said Orman, "I have no interest in your affairs, or in your girl. But I've agreed to fill in for Mr. Katon whenever he can use me. Just how he uses me is his business—and my own, too. You'd better meet me halfway on the no-meddle stand."

"That's no answer to what I asked! According to what that movie man said, you'll have to be picking up my girl and riding away with her, and it'll all be spread out on the picture screen for thousands to gawp at. Nothing doing."

A young fellow in the group spoke out, hiding impish mischief behind the mask of friendliness:

"You certainly can't afford to stand for any such rinktums, Wes. Folks all over the country will be asking how it ever come about that Wes Holt, feller o' his size and muscle, stood by and let his best girl be grabbed away by Orm Rowe."

"That's exactly it, and I won't stand for it, I tell ye!" raged the jealous Holt.

Rowe had no taste for argument against such silliness; he said as much and touched his horse, and the animal loped away at single-foot.

Holt bawled threats as long as Orman was within hearing distance and continued to bluster to his mates. "I can lick Orm Rowe and that fake-fighting director and maybe one or two others," he declared. "All I ask of you boys is to hold off the rest of the gang and give me a fair field at Brettun clearing tomorrow."

"Mebbe the boss movie-man will take a picture of it, like he grabs in at everything else that happens in town," suggested a youth, snickering.

UNDER these circumstances, the word quickly went out regarding Wesley Holt's belligerent stand against having his best girl make her appearance in a young-love-interest part. Therefore, Brettun clearing was filled next morning by all the folks of Comas who could get there.

"The more the merrier," announced Director Katon. "Here's the makings of a jim-dandy mob scene to mix it up when the getaway scene is shot."

He picked up his megaphone and informed the assemblage: "The young lover is going to rush out of that door, lugging a girl in his arms. He'll hop on his horse and elope with her. Some of you are glad because the hero is getting her. The others are backing the old codger who was ready to marry her. So you split off into two parties, and you mix it. Women pull off each other's hats—make believe scratch faces. But use judgment! Men whang into each other—not too hard, of course! It's only acting. But hold your faces straight. This is fun, but it's not to be laughed at."

Over and over he rehearsed the mob scene. Wesley Holt was in it as a volunteer in order to excuse his presence; the director began to take note of that battler's vigor. During a rest period, he took Holt to one side, asking acridly: "Trying to get up your muscle to start something here? Young fellow, you want to remember my warning!"

Holt was excited by the various tussles in which he had been giving and taking blows with other huskies. Roused thus to bravado, he declared stoutly: "When the time comes, I'm going to stop Orm Rowe from hugging my girl in the face and eyes of everybody. And if that's fighting talk, go ahead and make the most of it!"

Hero Katon had no notion of taking chances in earnest with this hulking chap.

"Look you, Holt! You're out of the picture from now on. I may hand you what's what later, when I won't be running risks of a bunged eye showing in a close-up. Do you see big John over there?" He pointed to the company's truck driver and general utility man. "He used to be a weight juggler on the stage—has lifted an auto on his back, with four men in it. Hi, John!" Katon yelled across the clearing. "Here's a rube I want you to keep out of all scenes and out of mischief in general. Understand?"

John grinned and flung up a hand the size of a young ham.

One of the young mischief-makers was on hand, eavesdropping. "Going to curl up and let it be put over on you, Wes?"

"Nothing like that! I'm going to show 'em!" Holt declared savagely.

Big John strolled up. Conscious of his strength and afraid of it if temper were allowed rein, John was constantly amiable.

Tom Mix's Lariat

WHEN we announced that the winning letter and roll of honor in the contest for Tom Mix's lariat would be announced in August, no one expected such a tremendous deluge of letters. So many hundreds of good letters arrived before the closing date on May 31 that the Editor is still busy reading and sorting them. A decision will be reached in the course of a few weeks, and the results will be published in an early issue.

He smiled when he commanded Holt to go away; he kept on smiling when the young fellow growled refusal; and then the giant even grinned broadly when he grabbed Holt, tucked him under a brawny arm and lugged the kicking captive to the edge of the clearing, followed by the hilarity of the onlookers.

"It's nice to make folks laugh," said John, squinting down into the contorted visage of his burden. "If you don't run away from here when I drop you, I'll grab you again and spank you—and then they'll laugh at you every time they see you, for a long while."

He dropped Holt, who landed on hands and knees. Over the youth John clapped big hands with resounding smacks, bodefully suggesting what the spanking would sound like if administered. Holt scrambled to his feet and fled from the threatened ignominy. He went down a wood road, malevolence firing his spirit to white heat.

Presently, realizing from the sounds of action that the performers were wholly absorbed, Holt climbed up among the branches of a tree and caught glimpses of what was going on.

Katon was rehearsing the principals in the "young-love interest." Over and over, Orman came rushing out of the door of the old house, the girl in his arms, her hands around his neck.

As often as they appeared, Director Katon bombarded them with explosive criticism from the muzzle of the megaphone. "Action okay, but expressions rotten! Smile up at

him, Alice! You're not being kidnapped for ransom! You're tickled pink to be running off with your true love. Smile—smile, Locky! Look awful happy! You're looking now like a thief running off with a sack of potatoes!"

The flight from the house had been shot in semi-close-up, so that facial expressions could be registered.

"You're great in action, Orman," continued Katon, smoothing over his previous criticism. "But you've got to thaw out that Yankee icicle face of yours in love scenes."

"I don't like to be in love scenes," blurted the boy, turning from the girl's vexation to face what he could endure better—the laughter of the throng.

"Well, you're through with the worst of it," consoled Katon. "Now it'll be a long shot and all action."

A long shot was necessary because Orman was now provided with a dummy on which Alice's gown and veil were placed with the assistance of her mother. Even Orman, with all his strength and agility, would have shown up awkwardly in mounting a horse with the real girl herself in his arms. But he came off handsomely with the light dummy. Away he went down the road leading from the clearing, his horse on the dead gallop, the veil floating over his shoulder, the draperies of the white gown fluttering.

Through the megaphone Katon bellowed, "Come back here for a close-up with the girl herself on the horse with you!"

All these separate shots, of course, were to be put together in the cutting-room to make a complete and consistent picture in which the close-up of the real persons would trick the theater spectator away from suspicion that a dummy had been used.

The camera man ground away until steed and rider had turned a bend of the road. Just before Orman disappeared the director commanded to the camera-man, "Iris out!" The shutter was closed gradually, narrowing the shot into a slow fade-out—denoting the end of a sequence in the picture.

However, a sequence in real life was just getting underway out of view of the throng in Brettun clearing.

FROM his perch, through breaks in the foliage, young Holt was sure that the girl herself had been carried off in Orman's arms. He dropped from the tree when the horse galloped past. As soon as the horse came trotting on his return, he leaped from behind a bush and in doing so got a

good look at Orman with white-draped arms about his neck, a veil-swathed head nestled on the hero's breast.

Before the innocent and amazed Orman could gather himself to prevent, Holt lunged forward and snatched the figure from the hero's lax clutch. He had braced his muscles to receive a burden. What he grabbed was a feather-weight object, an excelsior-stuffed imitation of a girl. Overbalanced by violence of effort, he tumbled on his back, heaving the dummy away from his grasp with the quick horror of one who has grabbed for flesh and captured a specter.

Instantly Orman leaped off the horse, with his coil of rope in his hand. He landed on Holt with full weight and with a violence which knocked the breath out of the latter. Then Orman dropped his rope over the antagonist's wrists and pulled the noos taut when Holt raised his arms to strike. With the same snap of action he secured Holt's legs with another noose, then with a mighty heave landed the young fellow across the saddle and bound him there.

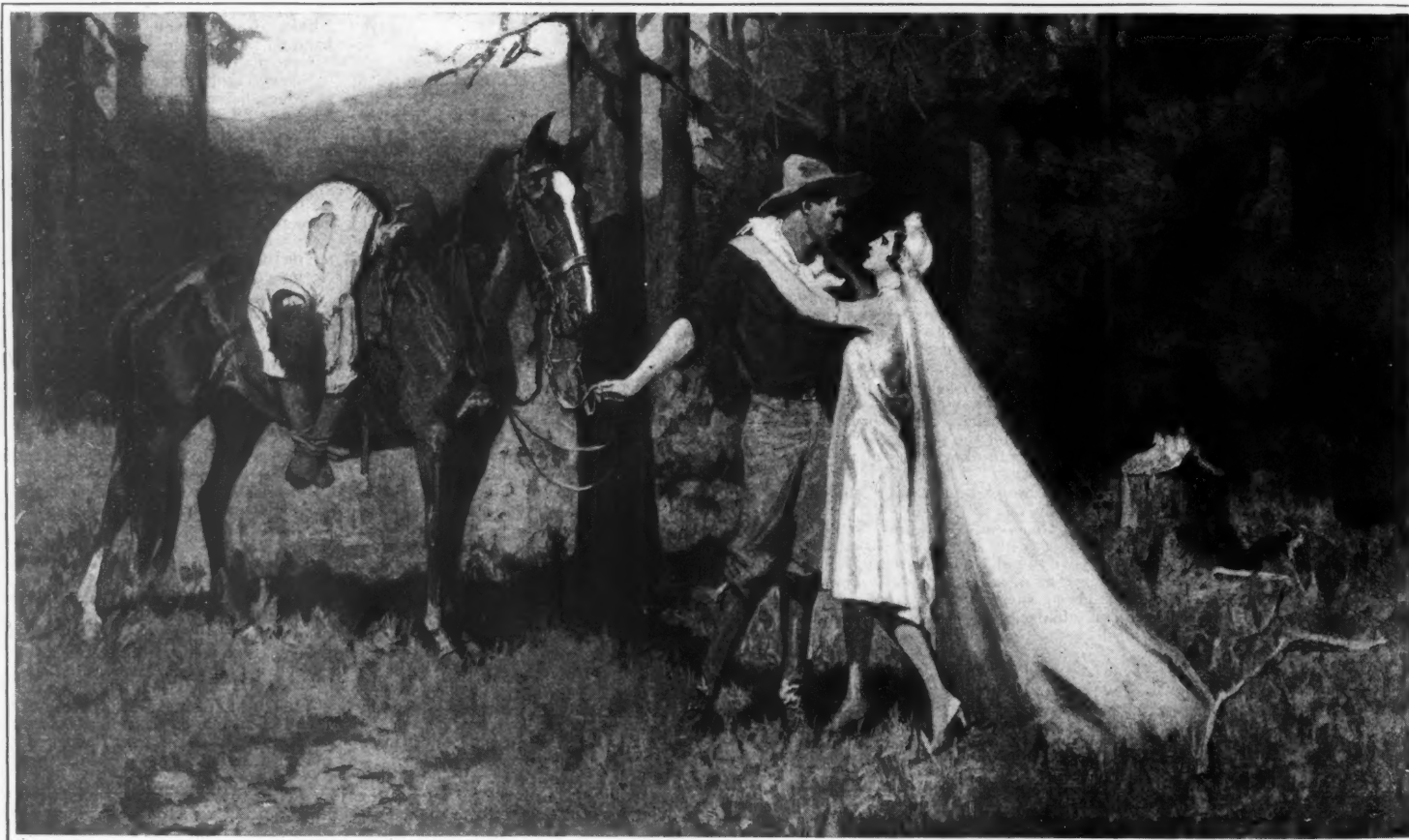
Then the modern and jazzed Lochinvar, who had met up with complications never dreamed of by a poet, carefully brushed twigs and leaf mold off the wedding veil and pretty white gown, tucked the dummy under his arm and returned to Brettun clearing, leading the horse, burdened with a bellowing captive.

Director Katon, crack-trigger "author," seized an opportunity the moment Orman appeared at the turn of the road. The camera man began to grind at the command snapped by the director.

"Come on, youngster! Come into a close-up! Don't lug that dummy like you'd been to the store after a string o' garlic. Prop the arms around your neck. No! I'll make it a better tie-up! Run down there, Alice!"

"Shall we stop laughing?" asked one of the "mob," wiping away tears of merriment.

"I don't care how much you laugh, folks! This is where Locky gets home with his bride. He has captured the great robber chief on the way and will collect a reward of five thousand dollars to set up housekeeping with. Mob, when I give you the word you go rushing down to meet Locky and girl. Jump and throw up your hands and holler. I'm shooting you from behind so your faces won't register as the gang at the smuggler's house here. Climb up into Orman's arms, Alice. Now come on! All set! Run, mob! Camera!"



"This is where Locky gets home with his bride. . . . Mob, when I give you the word you go rushing down to meet Locky and girl. . . . Climb up into Orman's arms, Alice. All set! Camera!"

STUNT PROFESSORS

Who are the men who put the thrills in the movies?

By Fred Gilman Jopp

CHIEF GRAY EAGLE had just completed the job of strapping two parachutes to his back when the movie director dashed into the airplane hangar and announced that the cameras were ready and the airplanes were warmed up. I had been talking to him, but he broke off suddenly.

"Sit tight, and I'll show you something you never saw before," he flung at me over his shoulder and disappeared.

A few minutes later the lead plane, carrying Gray Eagle, zoomed into the air, followed by three others. They flew off toward the Pacific in a long, slow climb.

"I think I'll go back to the studio," I said. "There's no use waiting around here to see that fool break his neck."

"Don't be so positive," laughed the movie star for whom Gray Eagle was doubling. "This stunt has been figured down so fine that there isn't one chance in a thousand of an accident."

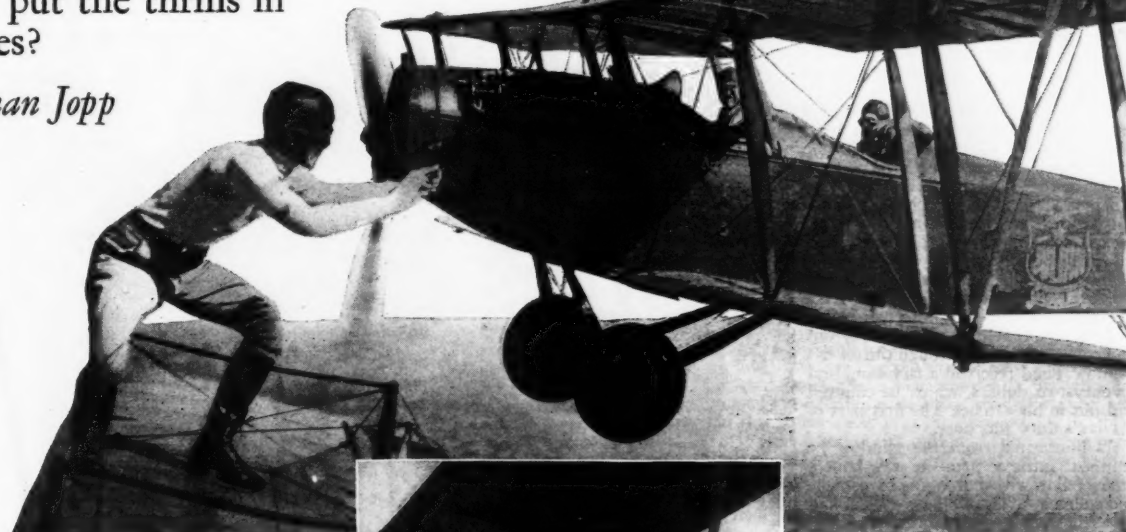
But somehow the words didn't carry conviction to me. I waited, with my heart missing like a badly tuned engine, as the four planes returned in perfect flight formation, the increasing roar drawing a swarm of spectators to the scene. I was to witness—what?

"Watch!" snapped the star, grabbing my arm.

A tiny something had broken away from the foremost plane and was hurtling downward. Its swift descent was abruptly checked as a parachute blossomed out above it. Then, at a prearranged signal, the tail plane of the formation nose-dived away from the two camera ships down to the level of the parachute and banked sharply about it in a circle. Then with a sudden roar it shot upward. A swinging hook hanging from its undergear caught the 'chute, tore into it and held—for an instant.

But the strain was too much. It tore Gray Eagle free from his harness and sent him, once again, hurtling to earth.

The star and I stood frozen. For what seemed an eternity, we watched. Then, four hundred feet above what seemed sudden death, Gray Eagle's second parachute tore open, and he floated to the earth as gently as a falling leaf. The tension snapped, and I became aware of the raving of the frantic director beside me. It meant much less to him that Gray Eagle was still alive than that the stunt had not been successful and



One of the most dangerous feats in the movies; climbing from one plane to another in mid-air. The small picture shows the actual moment of transfer.

would have to be repeated, in all its elaborate, expensive and terribly dangerous detail, next day.

And next day, sure enough, it was successful. Gray Eagle climbed past the hooked parachute, and went up the dangling rope, hand over hand, into the speeding plane above. The newspapers, which didn't know what I had seen, and what I am telling you, gave my friend the star wide credit for the deed.

But Gray Eagle didn't care. He had been paid off, and the check for which he had so carelessly faced death went intact to Oklahoma—to a sick mother. Time passed after that, and then his mother was taken to the Happy Hunting Grounds just two days before Gray Eagle met his inevitable fate. To earn his mother a proper burial, this brave Indian stepped out into the air fifteen thousand feet above the ground. Five parachutes were strapped to his body.

He intended to open them one by one, until there was only one left—the one which would bear him safely to the ground. Successfully, he opened four parachutes and cut loose as many times. But when he pulled the ring of the fifth, the ground was only one hundred feet away, and the 'chute never had an opportunity to open.



Dick Grace, Dare-devil

Before that spectacular picture "Wings" was released, I was invited to witness what was called a "preview." Beside me sat a little fellow who wore an iron brace on his neck. We watched as one battle scene after another was flashed on the screen. Every one was a thriller, and almost every one contained a grippingly spectacular airplane crash. One of them was so close to the lens of the camera that it actually brought cries and screams from the audience. A girl in the row ahead remarked to her escort, "The boy who smashed that airplane was badly hurt! I know it!" To which her companion replied, "Hurt, nothing! That crash was impossible, even for anyone who might be fool enough to try it. A clever piece of trick photography, that's all."

The little chap beside me grinned. He knew better. He was Dick Grace, the famous movie dare-devil and double. I myself had watched Dick at his work, and I knew that no trick photography could ever produce the amazing results of Dick's skill and courage. I had watched him crash three airplanes

and for his pains obtain a broken neck. I can tell you how it happened.

On paper the stunt appeared perfectly feasible. The plane was to strike the ground with the tip of one wing; the resulting whirl was to tear off the remaining wing and allow the fuselage to roll, thus distributing the force of the crackup over a wide area and giving the pilot a chance of escaping serious injury. Of course the flyer's clothing and the helmet were carefully padded. And, too, he was held in the cockpit by an arrangement of springs which was supposed to act as shock absorbers. Three times, with this protection, Dick crashed his ship successfully.

In the last crash, however, an air pocket dropped the plane's nose down just at the moment of contact with the earth. The ship buried its radiator in the ground and did not move six inches thereafter. The terrific jar of that sudden stop snapped Dick's head forward with sufficient force to crack a vertebra. Was he cured of taking desperate chances?

He was not. Still wearing a brace to protect that broken vertebra, he attempted to fly from Honolulu to the United States, but was forced to return to the islands because of engine trouble when only a few miles out. Landing in unfamiliar territory with a heavily laden ship is extremely difficult. The result was that Dick crashed again. It was a terrible crash which completely demolished his plane, but in some mysterious way he escaped this time, unharmed.

"The Old Death Crate"

Arthur Goebel succeeded where Dick Grace failed. His winning of the Dole prize is history now. It takes plenty of courage to fly over the ocean, but Art had courage plus. Like Lindbergh, he has earned every bit of the glory that is now being showered upon him. Art, as a celebrity, is the same easy-going lad he was in the days when he, too, made a living by doubling for movie stars.

Art may not like to have me tell you

[CONTINUED ON PAGE 404]

What Price Movie Stunts?

WHAT would you demand as payment for some of the dare-devil tricks that you have seen performed on the screen of your comfortable movie theater? Hollywood's casting directors, says Major Arthur Goebel, famous stunt flyer, have a regular scale of prices, as prosaic as the costs of so many yards of ribbon, which they will pay aviators and stunt men for risking their necks in any of the dozen ways possible. Here it is. Before you read the prices, cover them with a slip of paper and write out the sum that you would want yourself. Beyond doubt it will give you a shock to see how the prices of professional death-riskers compare with your own.

Changing planes in mid-air.....	\$100
Changing from plane to train.....	150
Changing from automobile to train.....	150
Changing from speedboat to plane.....	250
Parachute jump.....	80
Upside-down flying.....	100
Upside-down flying, man on landing gear.....	150
Fight on upper wing, one man knocked off.....	225
Double parachute jump, two men on one parachute.....	180
Crashing planes flying into trees, houses, etc.....	1200
Changing planes while upside-down.....	450
Looping the loop with man on center.....	500
Collision of automobile and train at crossing.....	150
Head-on collision between automobiles.....	250
Spinning plane to earth in crash.....	1200
Blowing up plane in mid-air.....	1500



The thrilling chariot race from Ben-Hur; a fine example of brilliant and dangerous driving

THE worst storm of years was raging when Thad Carter got off the train at Wateree and started walking rapidly down the only street the place afforded. In fact it was this that had deterred the older men in the office from venturing out on the important business of getting the lumbermen's pay to camp. It was the storm that had made them send him, the youngest of them all by ten years.

The wind, risen to a gale, flapped his raincoat about his long legs and tried persistently to blow off his hat. The rain fell in horizontal sheets; the gutters spouted; the street ran like a river. Not a person was to be seen. The ugly town, surrounded by forests and swamps, looked frightened and dismayed and inexpressibly dreary.

Intent on his business, Thad found the bank and presented a draft on a contractor of the town who had promised to pay that day. A clerk ran out and collected it; and through the teller's window Thad received a thousand and seventy-two dollars, which he counted and put in his satchel. The first part of his day's duty was over.

As he turned from the window he bumped into a man—a raw-boned, sallow fellow with a drooping moustache and sullen eye. The fellow's eyes, Thad noticed, were fastened on the satchel into which the money had disappeared. Yet he would have thought little of the incident had he not happened upon the same fellow again.

He had eaten dinner at the village hotel and gone to a livery stable. Accompanied by the proprietor, he was choosing a horse for his ride to the lumber camp. As they passed an empty stall he heard talking and recognized the man he had bumped into at the bank. There was another fellow with him; but the man's back was turned, and Thad did not see his face. However, he heard and remarked his voice—a high-pitched, whiny drawl. They looked like birds of ill omen, these two, talking low and confidentially. Thad chose his horse, had him saddled, fastened his precious satchel firmly to the saddle, and set out on his ride. The camp, he had been told, was ten miles up the river. He hoped to reach it before night.

But he suffered a most exasperating delay. As he passed the bank the clerk hailed him with the announcement that there was a long-distance call from the city. Thad dismounted and went into the bank, where he had trouble securing connection. It was the head bookkeeper, who had sent him out that morning. How were things coming along? Did he think he could reach the camp? It was important that he should; a rival company would get the men if the pay was not prompt. "Don't let anybody know your business," concluded the bookkeeper. "Take your gun with you, and good luck!"

Angry that he should have been delayed, —he had lost over half an hour,—Thad remounted and pushed his horse out of the town and through a level country interspersed with swamps and inhabited by negroes, whose cabins stood at intervals, dim in the storm; the smoke from the chimneys veered wildly. He had made about five miles, or half of his journey, when he overtook a man riding a mule.

"How fur was you countin' on goin'?" drawled the man, and Thad started uneasily as he thought he recognized the whiny drawl he had heard before.

"To the Wateree lumber camp," he replied.

"You can't git thar this way," declared the fellow. "The bridge across Crane Crick's gone, an' the water's up all over the country."

Thad reined up. "Are you sure?" he asked.

"Sure. I know what I'm talkin' about. But you kin cut through the spur of the swamp an' take the other road. It ain't much further. You kin take that road right thar."

A road turned to the right toward the misty line of swamp. Thad questioned the man closely. He knew, he declared, for he had lived in that country all his life. There seemed nothing to do but to follow the stranger's directions. So Thad turned his horse aside into the branch road.

It took him at once into a matted swamp of cypress and gum trees, tied together with vines and hung with Spanish moss. To the



The woman of the house sat by the dying fire, twisting her hands together; she was crying!

THE WRONG ROAD

By Samuel A. Derieux

ILLUSTRATED BY ARTHUR DOVE

right and left were black pools of water, their surfaces punctured by the dripping rain. But the wind could not penetrate these places; it was still in here, still and dark, with the wind rushing overhead and gently swaying the massive trunks of the trees below.

THAD had not gone far before he began to wish he had not taken the man's advice. His mind kept forming a link between him and the fellow he had bumped into at the bank—kept suggesting some sort of conspiracy. But he was full of youthful confidence; there was something exhilarating about the experience; he pushed doggedly along.

Once he thought he saw ahead a man riding a horse or mule, but he could not be certain. Anyway, he caught but one glimpse and the apparition vanished. Then dark, which came all at once, closed about him. The chilly damp seemed to engulf him. Only by looking over his head could he make out the remnants of the day: a leaden sky growing ever darker, and, rushing across it, just above the swaying tree tops, broken masses of wild clouds.

It was nearly dark, and he was debating whether

or not to turn back when he came to a bit of higher ground covered with pines and saw between the tree trunks a light shining through the mist. At first he thought it was the camp and sighed with relief. But on going farther he made out only a cabin with a barn behind. He stopped and hailed.

A woman's voice answered. It was eight miles to the camp, she cried. No, she did not think he could get there. He had better come in. She "reckoned" they could take him for the night. The relief at having found shelter was offset by the stubborn doubts that kept crowding his mind, and by his disappointment at not having reached camp. He thought, too, that the woman's

voice sounded surprised and frightened.

He rode into the yard. A small boy with a lantern came out and took charge of his horse. Thad unstrapped his satchel, and the woman, who had stood meanwhile on the porch, led him into a room where a fire of pine knots burned. She looked about thirty, stoop shouldered, sallow and tired. There seemed to be an excitement and dismay in her expression as she busied herself about supper. And more and more the apprehension forced itself upon Thad that something was wrong.



The house was full of children. They peeped at him from behind doors, only the boy who had taken his horse having the temerity to approach him. Yet their presence was reassuring; they made the humble cabin seem homelike, and went a long way toward dispelling his fears.

Gradually by smiles and winks Thad got the children near him—first a little girl in gingham, then a barefooted younger brother with a coat many sizes too big for him and a dirty face, and last a child so little that Thad could not be sure whether it was a boy or a girl. The child had not learned to talk: it stood at a safe distance, with little hands clasped behind its back, and stared with open-eyed wonder. Plainly a visitor was a rare spectacle.

But the sight of him eating (the woman brought his supper in to the fire) seemed to set their fears at rest. When he had finished they crowded around him, pushing one another away for favored positions at his knee. The little girl found her voice sufficiently to announce that Santa Claus was coming. And Thad as he talked to this wild little tow-headed brood quite forgot his disappointment and fears.

He was sorry when the mother came in and drove them reluctant to bed—all but the biggest boy. This young man, his dignity no doubt enhanced by the fact that he had put up the stranger's horse, steadfastly refused to budge, and the tired mother gave it up.

"I'm sorry," she said, "that Mr. Dawkins ain't here. He went to town an' hasn't come back."

"He's here!" announced the boy with the breathless interest of one who gives important information. "He's out to the barn with Jake. I seen him myself, him an' Jake. I seen 'em both!"

At this declaration Thad's fears returned with tenfold intensity. What could it mean? If the man of the house were on the place, why should he remain in the barn? And who was this Jake?

The woman, too, was plainly excited. She ordered the boy to bed so shrilly that he obeyed without another word. Then she turned to Thad and announced that she supposed he would be tired after his long ride, that she would show him to his room.

There was nothing for him to do but to acquiesce. To question her about her husband's whereabouts would be presumptuous. To tell her of his fears would be silly. Certainly it would imply that he did not feel safe under her roof. He picked up his satchel and followed her.

She led him through the porch into a little shed room where a candle burned dimly on a pine table. Here she left him, and he looked at the door first. There was only a latch with the string on the outside. At the other end of the room was a small window. There was no fireplace, no furniture except the table and a little cot with a coarse spread of unbleached cloth over it. What a place he had got into!

He sat down shivering on the bed. Out of doors he could hear the wind and the rain and the scraping of boughs. The storm seemed to shut him in, to confine him to that little trap of a room.

But he could not sit there and shiver. He got up, took his pistol out of his pocket and placed it on the table by the candle. Then he shoved the precious satchel slightly under the bed. He had left his raincoat in the room with the woman. Now he took off his coat and shoes with some intention of getting into bed. Suddenly he noticed something and stopped undressing.

The candle was very short. It would not last an hour. He would soon be in darkness. He looked at his watch. It was only nine o'clock, and the long night stretched interminably before him—a night he knew would be of wakefulness, even of terror. In spite of his efforts to put them down, his thoughts began to patch together the happenings of that day and to make out of them a chain of alarming circumstances. Was not the husband the man who had seen him get the money? Was not the man who had directed him here the same fellow he had seen in the livery stable? Was he not Jake?

ONCE on this train of thought, his mind refused to turn off. He had been sent here; he was about to be robbed, perhaps murdered; he was caught in that room like a rat in a trap. With hands that trembled with cold and excitement he put on his

"SOLDIER! SOLDIER!"

JONATHAN BROOKS, who writes for you the greatest stories of college sport that we have ever published in *The Companion*, has written the long story for September. Old Hi-Hup Tom O'Neill didn't like little S. Laveen, and before long his grudge had run to dangerous lengths. Then came the war—and in the desperate days of 1918 little S. Laveen had his chance at Tom O'Neill. Read the gripping story of what he did and why he did it in

SEPTEMBER

coat and shoes; went to the door and softly opened it. The inky blackness seemed to shove him back into the room. He closed the door again and stood gazing at the candle.

It was burning itself away. Soon the darkness he had seen out there would envelop him in this room. He could not endure the thought. He ought not to submit. His own safety, the importance of his mission, the protection of the company's money, demanded some sort of action.

But what? Go to the woman with his story? Go to the barn, where he believed the two men were, and demand his horse, thereby making plain the fact that he was frightened and perhaps inviting the attack he dreaded? Would it not be better to act as if all were as it should be?

The candle was beginning to sputter; he was shivering with cold and indecision. He could not face the night alone in this room. He must do something, even if it were foolish. He picked up his pistol and satchel, softly opened the door, stepped across the porch and on to the ground.

The rain drove in his face; a gust of wind smote him with bewildering force. But the ground underneath and the sky, however dark, overhead were a relief compared with that room and that dying candle. He grew more resolute. He would go to the barn and see for himself. He felt his way along the side of the house, turned a corner and tried to peer about.

Suddenly he saw a dim light shining on a dripping twig. He felt his way toward it, and came to a window. He stopped and peeped cautiously in. The woman of the house sat by the dying fire, twisting her hands together; she was crying! This was the most ominous fact of all—this woman crying all to herself. She knew, and was powerless to avert. But if she knew and was distressed at her knowledge, she was a possible ally to him. He felt his way back, rounded the windy corner, stepped up on the porch, rammed his pistol into his pocket, and opened the door.

She started with a little scream and rose, facing him with haggard eyes.

"Why were you crying?" demanded Thad.

She did not answer. "I'll tell you why." His throat was harsh, his voice husky. "There's something wrong, and you know it. I believe your husband saw me get money at the bank. I believe he sent another fellow to direct me here. I believe he and that fellow are out there in the barn. I don't intend to be murdered—not if I can help it!"

"Murdered!" she gasped. "Now I tell you what I'm going to do," he continued. "I'm going out there and demand my horse. If they try to raise trouble—they'll find all they want. The company's behind me."

He took his raincoat down from a peg and began to slip it on. The woman seemed absolutely dazed and helpless.

"Now I want a lantern to help me find the way. That boy of yours brought one into the house. You must get it. That boy spoke the truth, poor kid. He didn't know what sort his father is."

This last speech brought her to her senses. "He didn't," she sobbed, and looked at Thad with eyes of anguish. "I didn't neither. If it be as you say, I'll find out. If Jim's sunk that low, I ought to know it."

She ran into another room and brought the lantern, which she tremblingly lighted with a splinter. She put on a cloak, wrapped her head in a shawl and looked at Thad. "I'm ready," she said.

Together they stole into the night, the woman carrying the lantern. It made a little circle of light in a field of vast darkness. They reached the barn, a log structure with a hall in the middle and stalls on both sides. A light shone from the last stall.

Into the hall they went, Thad's right

hand on his pistol in his pocket; his other holding the heavy satchel. Near the door from which came the light the woman stopped and looked at him. Her face was white and pinched and old. Even in his excitement Thad felt his heart go out to her in pity.

"You stay here," she whispered.

Thad nodded and saw her go toward the door. Then he stole into an adjacent stall and peered through a crack. A lantern and a bottle of liquor sat on the ground. A man on a box whittled a stick. He was the man Thad had bumped into at the bank. Another leaned against the wall with his hands in his pockets. This was the man who had misdirected him at the forks of the road.

THAD had hardly time to note them when, lantern in hand, the woman appeared in the doorway. The whiny-voiced fellow started and took his hands out of his pockets. The man on the box looked sullenly up. His eyes were bloodshot, his face heavy.

"What're you doin' here?" he demanded thickly. "This here ain't no woman's business."

"No," she retorted with scorn, "it ain't. You never spoke truer. It ain't no man's business either. It's thief's business!"

"Oh! What're you talkin' about!" sneered the other fellow.

The woman fronted him with a face of loathing; and Thad was astonished to see her who had seemed so weak flash out strong and determined. "I'm talking about what I know, Jake Somers, an' what you know!" she cried. "You meant to rob that young man!"

The fellow tried to laugh. The husband

still looked dazed, like one who only half comprehends. Suddenly the woman turned to him with one hand outstretched.

"O Jim," she sobbed, "Jim, Jim, my husband!"

Thad saw him gulp. It looked for all the world like a play. He heard a horse stamp in the stall behind him, and the wind and rain without. His pistol felt icy cold, and there was a lump in his throat. He wondered how much more the woman could stand. He could see that she was breathing heavily, and that her strength was leaving her.

The fellow Jake must have seen it too. He had stood all the while with a leering grin on his face, watching her with his catlike eyes. Now he spoke: "Wal, if Jim Dawkins thar ain't man enough to take you to the house, I'll take you myself. And mind—no yellin'!"

He started toward her, and the woman gave a piercing scream that brought her husband tottering to his feet. Forgetful of everything but the scream that seemed to fill the barn, Thad dropped his satchel and, pistol in hand, rushed into the stall.

Jake Somers' hand went to his pocket; but the young man rushed on him and struck once, twice, three times straight down with his heavy revolver. The ruffian tottered, collapsed and fell in a heap in the straw.

It seemed to sober Dawkins like a dash of cold water to see his comrade in evil fall. He straightened up, and his eyes shone with a dangerous rage. But the woman threw herself on his breast.

"How low down you've got, Jim—how low down! I never strengthened you like I ought to, Jim; but the chillun took all my time."

"Oh, it ain't your fault," spoke the man. "You've done all a woman could, an' more." The ugly light left his eyes.

Just then there was a rustle in the straw. The stunned man was coming to. He moved first one leg, then the other, and began slowly to pull himself up by the feed trough. At the sight, Dawkins began to waver. Plain as words, Thad saw the hostile look return to his eyes. The young man's heart began to pound, and he clutched his pistol tight.

But the woman was on her guard. She never loosed her hold on her husband. With passionate entreaties she begged him to strike the man down that "had brought nothing but sorrow and shame."

"It was me as told him of the money," said Dawkins; and Thad thrilled at this show of honesty and fairness.

But the woman could not or would not see it that way.

"It was him," she cried, "that wildcat, as laid the plot. Wasn't it now, Jim?"

Dawkins nodded. "It was him," he said sternly.

There was a moment's silence. Jake now leaned against the wall, breathing heavily. Suddenly the husband disengaged himself from his wife's arms and caught him by the collar.

"Jake Somers," he said, "you offered to lay hands on my wife when I was drunk with liquor you give me. You've drug me down till I ain't nothin' more'n a beast. Git, man!" He began to shake him. "I give you warnin'—if ever I hear of you bein' in this country again, I'll tell things that'll put you in stripes if it puts me thar too!"

"You ain't done nothin', Jim!" cried the woman in terror.

But the aroused man did not appear to notice her. He dragged the other out of the stall. By the light of the lantern Thad saw him lead his late companion to the doorway and point to the woods; he saw Jake look up at Dawkins with murder in his face. Then suddenly, without a word, he went stumbling away into the darkness.

Thad spent that night in the room from which he had fled. Not another fear disturbed him. Three times he waked. Each time he heard in the other room the voices of husband and wife. Once he thought the man sobbed. Then he fell asleep, and when he waked the sun was shining through the window.

He ate breakfast with them. Nothing was said of the past night. But the woman's eyes were deep with gratitude; and, though the man hardly lifted his face from his plate, there were signs enough in his clean clothes and humble manner to make Thad believe that he had started afresh.

It was this new Dawkins who brought his horse, saddled, to the door, and led the rider to the road, where he reached up and shook Thad's hand.

"My wife," he began and cleared his throat, "told me to say that—that—" His voice broke. "You know," he said. Then he straightened his shoulders and pointed down the road. "Keep this here way," he directed. "In a mile you come to the big road. Turn to the right. You'll be thar before midday. If you are ever in this country ag'in, come to us—if you feel like it. You'll be welcome, mighty welcome! Good-by."



The woman threw herself on his breast. "How low down you've got, Jim—how low down!"



Meantime Jonas and Habbat and Sokkosis were testing their skill by shooting arrows at the moose's head, set up at a distance of twenty paces

AUGUST that summer was very hot and dry in Maine. Forest fires were raging in the woods to the northward of the old farm, and for several days the sky had been so smoky that, though unclouded, the sun was red as blood even at noonday, looking, as Addison said, like a red-hot stove lid.

That forenoon we had been giving the corn a second hoeing, and when we went in to dinner the house indoors was actually gloomy.

"I almost think we need candles," Grandmother Ruth remarked as we sat down at table. "You don't suppose another Dark Day is coming on, do you?" she added with a glance at the Old Squire.

Any allusion of that sort always roused Addison's curiosity and was apt to set him off asking questions.

"What about that mysterious Dark Day?" he queried. "When was it?"

"Oh, it was long before any of us were born," Grandmother Ruth replied. "Do you remember, Joseph, when the Dark Day occurred?"

The Old Squire reflected a moment. "May, 1780," he said at length.

"But was it really very dark?" Addison questioned.

"All I know, of course, is what I heard my folks say," the old gentleman answered. "They said it came on so dark one could not see to go about, or work."

"But what caused it?" Addison insisted. "Well, that is what no one was fully able to explain at that time, or indeed since. Some held that it was occasioned by smoke from burning forests in Canada or the great moss beds in Labrador; but it did not seem like smoke. Others believed that a volcano must have suddenly burst forth in the White Mountains; but no such volcano was afterward reported. A soft, inky gloom, it was said, filled the heavens and appeared to descend upon the earth like a starless, moonless night."

"There must have been some natural cause for it," Addison observed a little impatiently.

"Beyond doubt," the Old Squire agreed and went on to recount many more facts relating to it. Great alarm prevailed. Many thought the end of the world was at hand in accord with the Scriptural prophecy that "the sun shall be turned into darkness and the moon into blood before the great and terrible day of the Lord come." Not many persons of that generation were as self-contained and courageous as a certain member of the Connecticut Legislature, Davenport by name, of whom the following anecdote is preserved. The Legislature had gone into session that day; but when the hall grew too dark to see the face of the Speaker many members grew alarmed, and someone hastily made a motion to adjourn—as the end of all things was evidently at hand. Whereupon Mr. Davenport arose and said:

"Mr. Speaker, this is either the Judgment Day, or it is not. If it is, I wish, sir, to be found doing the work which the people of Connecticut have sent me here to do. If it is not, there is no need for adjournment. I move, sir, that candles be sent for and that we proceed with our business."

As observed in Maine, it began to grow dark at about nine o'clock in the morning, became too dark to tell the time of day by

THE DARK DAY

By C. A. Stephens

ILLUSTRATED BY HAROLD SICHEL

watches at ten, and grew darker still by eleven and twelve. During the afternoon the obscurity lifted a little but it extended into the succeeding night. In several portions of New England there were thunder showers that day; but all accounts agree that the darkness was not caused by rain clouds.

A remarkable feature of it in many places was a very fine, impalpable black dust, or smut, which lay as a scum on pools and ponds of water. Birds and animals exhibited entire bewilderment; barn fowls sought their roosts, cattle came home from their pastures and lowed plaintively to be yarded.

AT this time—1780—the American colonies were in the midst of the Revolution. It was a period of great depression. Little hope of final success was felt. Great destitution prevailed among the poorer people, and in those days nearly every one was poor. The most of the younger men had already served in the Continental army under Washington, Knox or Gates; and numbers of these whose terms of enlistment had expired were now seeking new homes for themselves and their young families in the wilds of Maine.

Among these home-seekers was the writer's great-grandfather, and with him were three recent comrades in arms, named Jerry Hobbs, Jotham Eastman and Benjamin Flint. They had journeyed from Falmouth, now Portland, up into the then nearly unbroken wilderness of Oxford County to spy out the land with a view to locating fertile farms. On this exploring jaunt Flint was accompanied by one of his younger brothers, Jonas Flint, a boy about fourteen years of age. They had paddled up Lake Penesseewassee on the day before, in a canoe fashioned from a pine log, and, liking the general appearance of the country to the west of the lake, set off next morning to give the land a more thorough examination, digging holes to test the quality of the soil and prodding it for stones with an iron-shod rod, brought for this purpose. Good, deep yellow soil, free from stone, was what they were in quest of; and this broad tract, sloping gently back from the lake appeared very promising.

This critical examination had been in progress for an hour or two, and they had gone half or three quarters of a mile from the lake shore when Jerry Hobbs noticed that it was growing dark and that objects were taking on a strange somber hue.

"What's happening?" he exclaimed to our great-grandfather—whose name was also Joseph. "Things look queer."

"Shower gathering, I guess," the latter replied; and all four at first supposed the obscurity was caused by dark clouds which the thick tree-tops overhead prevented them from seeing.

It soon grew darker.

"I hear no thunder," Flint remarked.

But ere long it grew still darker.

"This is strange!" Jerry cried.

"I dunno what to make of it. I can hardly see the tree-trunks. It can't be night yet. Why, it's no more than ten o'clock in the forenoon," Flint observed.

Thereupon Eastman, a very active young man, lay hold of the low limbs of a large old yellow birch and, swinging his body upward, climbed rapidly to the very top of the tree.

"What do you make of it?" Jerry shouted up at him. "Is it just a big shower coming up?"

"I don't see any clouds," Eastman shouted back. "No clouds anywhere. But I can't see the sun either! The whole sky is black!"

They remembered that the sun had looked fiery red that morning; and Great-grandfather, who was in a way a religious young man and a church member, began thinking of the Scriptural prophecy.

"This may be the end of the world," he said soberly. "I hope we are prepared."

Apparently the boy Jonas did not feel at all prepared for such a catastrophe. "What shall we do?" he cried, half in tears. "Let's go back to our boat, where there's water, before we all burn up!" And he started to run, but plumped into a fallen tree-top, for it had grown too dark now to discern anything properly.

All five set off to return to the lake; but, either from confusion of thought, or the increasing obscurity, they mistook the direction, lost their way completely and became wholly turned round.

At length they smelled smoke, and this started Jonas off in another panic; he now believed that the final conflagration was drawing near.

"The world's afire!" he cried. "Oh, where can we go?"

A LITTLE later, however, they suddenly came out on the shore of Little Penesseewassee Lake, which lies two miles to the west of the larger lake of that name, where the explorers had left their craft. The odor of smoke was still diffusing itself about; and, after following the shore a little way, they came unexpectedly upon the camp fire of a party of nineteen Indians from the Saco River valley, who had come over to fish and hunt moose about the lake. There were five squaws and six or seven papooses; and when the whites discovered them they were seated about the fire with heads bowed in their hands, listening to one old gray redskin who was talking in a low, monotonous voice, as if recounting ancient traditions. Hard by hung the carcass of a young moose, freshly-killed.

At this time the Indians that remained in Maine were generally supposed to be friendly—at least not hostile. Lovewell's famous fight with the Pequawkits at Fryeburg had occurred many years previously, and most of that once powerful tribe had gone to join the St. Francis Indians in Canada.

One of the papooses was the first to espy

the approaching whites and started up with a low cry of terror. The older Indians did not stir from their seats, however, and their medicine man continued his mutterings. The four home-seekers drew near and quietly seated themselves beside the red aborigines. If Judgment Day was near at hand, it was no time for race distinctions. All must soon share a common fate, and they felt the bond of common humanity.

A kind of torpor had fallen upon them. The forenoon passed. Great-grandfather related that neither they nor the Indians rose to depart, but continued sitting wholly in silence about the dead embers of the camp fire.

But as the afternoon drew on it began to be noticed that the darkness had lifted a little; and in the course of another hour it had grown sufficiently light to distinguish objects about them. The papooses now began moving around and talking; they were hungry. Presently one of the squaws replenished the fire and set venison to fry over it.

The whites lingered, not unwilling to accept hospitality from these new acquaintances. Their fears had somewhat abated with the return of daylight; the world was still moving on, and before very long the disk of the sun became visible through the black pall that overspread the sky.

Jonas, much relieved, began making overtures first to one then the other of two Indian boys of about his own age who were fetching bits of moose meat to roast on sticks by the fire. An appetizing odor filled the air; and, noting the white lad's interest in the proceedings, the red boys shared their tidbits with him.

One of the young redskins, Jonas discovered, was called Habbat, the other, Sokkosis. A squaw girl, looking as if she might be twelve or thirteen years old, also joined them. She was a fleshy child with very large arms. It displeased her to see Habbat give the white boy some of their food, and, coming close she snatched it from him, whereupon one of the older squaws approached—her mother, perhaps—and gave the little fat squaw a proper shaking up. Later the red girl avenged herself by making horrible faces at Jonas. Habbat, much disgusted, went to report this, and the older squaw, returning, took the offender away.

Great-grandfather related afterward that they joined the Indians in a friendly feast about the camp fire, and that all had become so hungry that nearly everything edible from the carcass of the moose was consumed. Jerry Hobbs and Eastman, who possessed good voices, then sang that grand old song, "Woodland," to which their red acquaintances listened in some astonishment, but with evident pleasure.

Meantime Jonas and Habbat and Sokkosis were testing their skill by shooting arrows at the moose's head, set up at a distance of twenty paces. The bow, made from a dry strip of hornbeam, was one of several which the reds still used in hunting, though they also had guns. It was a long, powerful weapon, so stiff that Jonas had difficulty in drawing it.

By sunset the singular black opaqueness that had brooded over the country mostly lifted. The whites went back to their camp on the larger lake and next morning resumed their quest for farms. The Dark Day had passed.

CHAPTER EIGHTEEN

The President's Policies

ONE of the reasons which Washington had for his policy with respect to France did not confine itself to the matter of letting each nation settle its own internal affairs. If France continued to go forward in the way she was going, she was certain to have another war with England; and if so, she would be sure to call upon the United States to help her. Grateful as Washington was for the help of France, he had no notion that the United States should stand ready at any moment to fight France's battles. This country wanted to preserve peace with Great Britain and with all other countries, and not to be bound to fight their battles.

Yet in this country was much popular hatred of England, growing out of the Revolution, and also a very deep sympathy with France. The cloud of the Anglo-French situation was on the horizon during the whole of Washington's eight years as President.

The French Republic sent to the United States as ambassador "Citizen" Genêt, for it was the fashion just then to use this title for officials of all ranks. He was a stirrer-up of mischief. He began at once, even before presenting his credentials, to fit out ships in American waters to cruise as privateers against the British. He found abundance of sentiment favorable to his method; and it was not long before Great Britain's minister entered formal protest against the fitting out of ships in American ports to make war on British commerce.

Washington was compelled to demand the recall of Genêt, and he had much trouble before the serious tangle on account of French interests along the Mississippi was unraveled. We were in danger of three wars at once, with England, with France, and between East and West. Besides all these, there were dangers of Indian uprisings in several localities.

What ought to have been the beginning of a better state of affairs was a treaty with Great Britain, which was greatly needed and in the main was a good one, but which included some features that brought bitter protest. John Jay negotiated the treaty, and for it was hanged in effigy in many cities and towns of the United States. The Senate ratified the treaty by exactly the necessary two-thirds vote, and the people rose in mighty denunciation of Jay and the Senate and Washington. Faneuil Hall was packed with a crowd of vehement Bostonians, and New York rose up and stoned Alexander Hamilton when he attempted to speak in defense of the treaty.

At the end of four years, Washington was reelected, and he served for a second term. While some of the initial problems had been solved, others rose. Hamilton and Jefferson had quarreled, as they might have been expected to do, and the cleavage between the parties grew more evident. Washington was glad when his second term drew near to its close.

Let it be admitted, also, that Washington was not the only one who was glad. He could have had a third term if he had sought it, probably, but it would have brought him divided support and much unhappiness. In February, 1796, the House of Representatives, which had been in the habit of adjourning for a half-day in honor of his birthday, refused this customary courtesy. When his term ended, one opposition paper proposed a day of rejoicing: "Every heart in unison with the freedom and happiness of the people ought to beat high with exultation that the name of Washington ceases from this day to give currency to insults and to legalize corruption." Washington had his bitter enemies, as all strong men have. But such things hurt even strong men.

One hostile critic said: "His character can only be respectable where it is not known. He is arbitrary, avaricious, ostentatious. Without skill as a soldier, he has crept into fame by the places he has held. His financial measures burdened the many to enrich the few. History will tear the pages devoted to his praise."

Words equally bitter and equally unjust were said of Lincoln while he lived.

The American people have not yet learned how to be just toward their great men. We never have had a great leader who was not shamefully abused while he was alive and as shamelessly glorified after he was dead.



Courtesy of the Metropolitan Museum of Art
Frederick MacMonnies' "Washington at Princeton," an allegorical group showing General Washington with eyes fixed on the future, led by the symbolical Goddess of Liberty

DEATHLESS SPLENDOR

The Life of Washington

By William E. Barton, D.D.

The youth of America should learn a more discriminating appreciation of greatness than their fathers have known how to show.

Washington made mistakes. This biography has not tried to conceal them. He had faults; we are not seeking to apologize for them. We can afford to be honest. But Washington never deserved the abuse that was hurled at him in the closing months of his administration.

There is a tradition that testy old John Adams once shook his fist at a bust of Washington, and said, "You old mutton-head! If you hadn't had sense enough to keep your mouth shut, they would have found out how stupid you really were!"

Washington's ability to keep his mouth shut may have been due in part to his badly fitting false teeth; but he also had learned that the carefully written word was safer than the official spoken word. He did not often trust himself to extemporaneous speech. What he had to say on public matters he wrote.

Although many of Washington's best friends were urging him to be a candidate for the third term, and there was no agreement as to who ought to succeed him, he left no doubt of his intentions; on no condition would he be a candidate for a third time. If the country had been unitedly supporting him as it was at the time of the first two elections, he might possibly have consented to run again; but it would have been a mistake. He was wise in stopping when he did.

As soon as Washington reached this decision, he set about the preparation of a farewell address. He talked the matter over

with James Madison, with whom at that time he was on good terms, and Madison wrote a considerable part of the address. When the time came to complete it, he and Madison had separated, and Washington gave to Alexander Hamilton the material which he had, and Hamilton reshaped portions of the Madison manuscript and with Washington's approval wrote more. Washington never pretended to have been the sole author of the document. He obtained the best help he could secure, in order to present his convictions as strongly and effectively as he could.

In September, 1796, the Congress assembled and this address was delivered—not in person, but through a newspaper. It was an impressive occasion, and the Farewell Address was regarded justly as an event which made it memorable. The address has become one of the landmarks of American history. Indeed, it may be said with confidence that Washington's declaration concerning the foreign policy of the United States is the most important fundamental affirmation of the national life in its relations with other powers.

Washington uttered two warnings. The first was against internal strife and sectionalism. He feared the growth of the party spirit in American politics. He desired that all should see the nation as he saw it, a unit, with interests binding the national life of the people together far stronger than any that could justify any section in seeking to withdraw from the interests and welfare of the whole.

The second was a warning to America not to become entangled in the political

affairs of European nations. Those countries had interests quite different from our own. It could do them little good and us much harm to meddle in their internal affairs.

On March 3, 1797, President George Washington gave a dinner in Philadelphia, the seat of government, to President-elect John Adams, Vice-President-elect Thomas Jefferson, the foreign ministers and other distinguished guests and their wives. It was, on the surface, an occasion of good cheer, but there was an undertone of sadness.

On the next day John Adams was inaugurated the second President of the United States. He paid a high and just tribute to his predecessor. At the close, Washington rose, removed his hat, made a bow, and waved a silent farewell to all present. Neither he nor they could have spoken.

On the evening of the day on which he attended the inauguration of the new President and Vice-President the merchants of Philadelphia served him a notable banquet. A very weary man lay down that night in Philadelphia. George Washington held no office, either civil or military; he was a private citizen, and glad of it.

CHAPTER NINETEEN

George Washington—Private Citizen

GEORGE WASHINGTON was not permitted to slip away from Philadelphia quietly. When he and his lady and Nellie Custis, and Lafayette's son, George Washington Lafayette, who was glad just then to be out of France, ascended their coach steps for the return to Mount Vernon, Philadelphia and its multitude of visitors, official and otherwise, lined the streets to see them pass and bid them farewell. All along the road their progress was triumphal. At the cities through which they passed their greeting was tumultuous. But they did not halt long in any place. Even in Baltimore they remained only one night. They were in haste to get home. Washington City, the new "Federal City" provided for by the Constitution, paid its welcome to them. It was a meager affair compared with the celebration at Baltimore, but there was a salute of sixteen guns, and there were "repeated huzzahs dictated by hearts sensibly alive to his merits."

Home again, after eight long years, they passed several quiet, uneventful and largely indoor days; but George Washington did not commit to his diary his meditations on the strange changes that had come into his life, or the contrasts between the peace and quiet of Mount Vernon and the events of his two long absences, once as a soldier and the other time as President of the Republic.

By March 28 he was so busy about his farms that he made no record even of the weather for the rest of that month and all of April. On May 1 he went to Alexandria, paid \$47.87 duty on goods imported from Liverpool and collected a \$100 dividend on bank stock. June 22 he began his wheat harvesting. July 17 he "went up to the Federal City" and remained there that day and all the next. For the most part, he was looking over his plantation, which greatly needed his attention. His buildings had been neglected. Moreover, he felt the need of a new building, to house his papers. He had a secretary, Tobias Lear, who came into his employ in 1786 and remained with him till death. His coming was a relief to Washington, but the General's correspondence was heavy, and he attended to most of it himself.

This regular round seemed likely to be interrupted. France was misbehaving again. Charles C. Pinckney, sent as our minister to France, was treated with discourtesy. President Adams then sent a special commission to France. Envoys were insulted, and attempts were made to bribe them. It was not of the Barbary pirates but of France that Pinckney said, "Millions for defense, but not a cent for tribute."

The situation became intolerable. President Adams was ready to declare war on France. Washington, who had suffered much and long, believed this decision to be a righteous one. Adams offered Washington the chief command, and Washington, in a letter commending Adams, announced himself as ready to fight again, if France did not cease her offensive course.

[CONTINUED ON PAGE 400]

FACT and COMMENT

How the Companion Editors
see the News of the Day

THE YOUTH'S COMPANION

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WE DO NOT BELIEVE in immortality because we have proved it. We forever try to prove it because we believe it.—James Martineau.

THE LAW STILL HOLDS that a man cannot justly be punished twice for the same offense, but boys are less fortunate. They still run the risk of getting something unpleasant at home, after they have got something equally unpleasant at school.

THE WELL-INFORMED JOURNAL DE GENÈVE declares that the Pope has received from the soviet government of Russia notice of a formal sentence of death pronounced against him because he has given aid and encouragement to the movement against Bolshevism. There is one sentence that seems likely to be indefinitely "suspended."

PRESIDENT NEILSON of Smith College makes the biting, if a little exaggerated, comment that the college graduate can be told from one who has not been to college only by his rather more intelligent knowledge of sports. A fairer way of putting it would be to say that a college degree nowadays offers no assurance of real cultivation on the part of the holder.

MUSIC," said William Congreve, "hath charms to soothe the savage breast." The French have put this aphorism to the test by having music played at regular intervals in the prisons in and about Paris. It is declared that after the right sort of program the prisoners manifest the emotions of remorse and repentance, write letters to families long neglected, and even confess past offenses of which they had never been suspected. Perhaps the time will come when a chamber concert from Beethoven or Tchaikowsky will supersede the "third degree" as a police institution.

HIGH MARKS AND HIGH SALARIES

NO subject has given rise to more frequent and inconclusive discussion than this: Does high rank in scholarship during a college course give any indication of the future success of a boy—particularly in business pursuits? We are all familiar with the arguments on both sides. Unfortunately, these arguments are usually buttressed only by prejudice or by a limited, individual experience, and really convince nobody except the persons who maintain them. Hitherto there has been very little exact observation over a great number of cases—the only kind of evidence that is of real value.

From a recent magazine article by Mr. Gifford, the president of the American Telephone and Telegraph Company, we learn that that great corporation has actually collected a lot of valuable testimony on the subject. It has studied the work of nearly four thousand college men whom it has employed, and compared their varying degrees of success with the kind of rank they took in college. The conclusion is that there is a clearly evident relation between high marks in the

classroom and distinct achievement in business. Five hundred of the men studied were in the upper tenth of their classes, by rank. By the time they had been working five years for the telephone company, their average earnings were noticeably higher than those of the other group. This advantage steadily increased, and more rapidly as time went on. By the time they had been graduated twenty-five years they were far ahead of the others and occupying far more than their share of highly paid and responsible positions.

Thus is justified the *a priori* argument that men who have enough brains and application to get good rank in college will prove to have brains and industry enough to do well in business. It has long been admitted that good scholars make the best lawyers and doctors and ministers and engineers. Now it is apparently true that they make the most successful business men, too. Of course the test is far from infallible. Other qualities than brains are useful in life. It is sometimes the case that good scholars have defects in temperament or personality that make them misfits in business. It also happens quite often that naturally talented fellows do not make the most of their college course and in later life disclose abilities that never appeared in their classroom work. It is the observation of cases of these two sorts that has led many a business man to decide that college rank does not mean anything to him, and even that a college education is of no particular advantage to a young man entering business.

But Mr. Gifford is of the opinion that in general high rank in college does indicate good abilities and power of concentration. Other qualities being equal or anywhere near equal, he prefers the good scholars for his company and expects them to rise to higher posts faster than the men who take only average rank. And he has the facts to support him.

THE ELECTORAL COLLEGE

THE President of the United States is chosen in a curious way, quite unlike any method of election used elsewhere. More than that, he is elected in a way that is very different from that which the founders of the Constitution intended. The whole practice of our Presidential elections is an interesting illustration of the possibility of evading or undermining a written and supposedly rigid constitution, whenever the conditions make it desirable to the people. The original idea of the fathers of the Constitution was to avoid the choice of the President by a popular vote. They did not leave the election to Congress, either, as the founders of the present French Republic did. They set up a separate body, which has come to be called the Electoral College, perhaps by analogy with the College of Cardinals that chooses a pope—the nearest electoral body—in theory, at least—to the assembly thus created.

But the College of Cardinals meets all together and remains in session until it has finished its business. Our own Electoral College meets in forty-eight separate state capitals, each state delegation by itself. The electors vote and send a record of their proceedings to Washington. If it appears that one set of candidates has a majority of all the votes, they are declared elected President and Vice-President. If no candidates have a clear majority, the matter is not referred back to the Presidential electors. The House of Representatives elects the President, voting, not *en masse*, but by states, each state having one vote. The Senate elects the Vice-President. Not since 1824 have these duties devolved upon the houses of Congress.

In the beginning the electors, even when chosen by popular vote (and sometimes they were chosen by the state legislatures, so that the people had no voice whatever in the selection of a President), were not pledged to any candidates. They were supposed to be men of especial character and intelligence, who would use their own judgment in the choice of a President. There was no reason why the votes of each state should not be divided among several candidates—and they often were. So far as the law and the Constitution goes, that is the case today. The obligation of an elector to vote for his regularly

nominated party candidates is purely moral. If he chose to violate that obligation and vote for someone else, he would be quite within his legal rights.

But the rise of great political parties soon changed the actual practice of the Electoral College. For a time, party candidates were put up by a caucus of the members of that party who had seats in Congress, or proposed by the state legislatures of various states. That method did not work well, however, and for almost a hundred years we have used party conventions, the delegates to which are elected for that special purpose by party caucuses or primaries in the various states. When such conventions have made their nominations, the party becomes pledged to the support of the candidate so named, and the members of the Electoral College, elected by the people in November, are equally pledged to cast their votes for the same candidates. Accordingly, it is now the rule that all the electoral votes of a given state are cast for the same candidates, either Republican or Democratic. The only exception is when the vote of the people is so evenly divided between the two parties that some electors from one ticket and some from another manage to get a plurality.

Only three times since 1860 has a third Presidential candidate received any electoral votes—General Weaver, the Greenback candidate, in 1892, Mr. Roosevelt, the Progressive, in 1912, and Senator La Follette, also a Progressive, in 1924. In none of these cases was the third-party strength sufficient to prevent a choice by the Electoral College.

THE HORSE-CAR AGE

MR. HENRY FORD is a man who has done as much as anyone to hurry society forward into a new age, distinguished by revolutionary changes in environment from that of only a generation or so ago; but he has also a quaint interest in preserving affectionately the abandoned and antiquated apparatus of the older civilization. Accordingly he has set up at Sudbury in Massachusetts a collection of Colonial or early American buildings and furniture, and at Dearborn in Michigan a museum of mechanical antiquities, in which he takes a great delight. To the latter collection he has just added a venerable horse-drawn street car, which he got in Brooklyn, that he has referred to as a "rare old relic."

Nothing shows any better the rapidity with which the surroundings and conveniences of our daily life have changed and are changing than the application of such words to the horse car. Men and women who would refuse to think themselves old rode in horse cars, not only in their childhood but well on into their young manhood and womanhood. Electricity and gasoline have driven Dobbin pretty well off the streets and entirely out of the business of passenger transportation, and they hustle us about so fast nowadays that we do not realize how short is the space of time, measured in years, since they conspired to change over almost all our ways of living and of moving about.

For the horse car is not the only "rare old relic" of an age that is only some thirty or forty years gone. How many of the commonplace essentials of life in those days have given way to something quite different! Hansom cabs, for example, and the good old-fashioned "hack." Mr. Ford will surely have specimens of those preserved for the amusement of posterity, which will find them as antiquated as the sedan chair. And yet we who speak to you have known both when they were the last word in convenience and usefulness.

Those were the days when ingrain or Brussels carpets covered the floors of every well-furnished house. They had to be laboriously ripped up every spring, beaten free of dust over the clothesline in the back yard, and more laboriously tacked down again. How many yards of carpeting have we scuffed back into place,—putting on rubber shoes for the purpose,—with a mouthful of tacks in storage, to be employed as soon as the refractory carpet was at last stretched smoothly from baseboard to baseboard! Carpets of this sort still exist, no doubt, but they wage a losing fight against hardwood floors and rugs—which used to be thought a combination of luxury and austerity of which no good housewife could approve.

It was the era, too, of kerosene lamps in the country and gas lamps in the city. Does anyone use either now when electricity can be had? The art of the chandelier-maker was a fearful and wonderful thing. We recall strange confections in brass and bronze, and especially the little sisters of the Goddess of Liberty that used to stand on the newel post of the front-hall staircase upholding a gas burner shielded with a decorous red-glass shade.

Portable wooden washtubs still maintained themselves in almost every kitchen or laundry, and in many homes served the purposes of bathroom as well. "Set tubs" were occasionally to be seen, but they were rare. It was a proud abode of luxury that could boast one bathroom. Two or three or four such institutions under a single roof were still undreamed of.

There was no telephone in those days, though we had heard that the strange invention would really work. If you had a message for a friend, you walked to his home or office and gave it to him. If you wanted the doctor in a hurry, you had to run for him. When you got there you pulled a knob that was attached to a wire that rang a bell somewhere in the back hall. If it was at night, there was a speaking tube beside the bell knob up which you shouted your appeal for haste.

Memories crowd in upon us: the cistern in the cellar, filled with rain water conducted from the roof, and connected with a pump in the kitchen; the lightning rods, without which every house was considered to be in constant peril from the heavens; the minstrel show, still the chief delight of an unsophisticated public—all contemporaries of that "rare old relic" the horse car, all familiar to a time that thought itself a marvel of human progress, but that the youth of today smile at as hardly distinguishable from the Middle Ages!

IF YOU WERE VERY RICH

MOST people engage at times in speculations as to what they would do if they were rich. They find it easy to plan for the comfortable and beneficent disposition of their lives if they were so fortunate as to have an income of fifty thousand or a hundred thousand dollars a year. They would live without ostentation, in moderate luxury; they would travel; they would assist all their needy relatives and friends; they would contribute generously to all good causes.

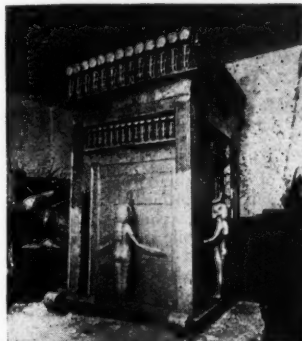
So it is a comparatively simple matter for anyone to plan a satisfactory disposition of his income if only he were rich—just rich. But suppose you happened by some freak of fortune or your own outstanding ability as a money-maker to become one of the very rich—one of those whose income is to be reckoned, not at a hundred thousand dollars a year, but at five hundred thousand or a million dollars a year. The richer one is the more difficult must become the problem what to do with the money. Divide most of the surplus income among the employees in the industries from which it comes, advises one person. But it has been demonstrated that to pay in one department of industry or in a single establishment wages that are far in excess of the market value of the labor is to the disadvantage of the general public. Employees in other departments or establishments, stirred by jealousy, insist upon an increase in their wages; that increase can only be granted through increasing the cost of the product to the consumer.

So, if you were not merely rich, but overpoweringly rich, what would you do with your money? Some persons distribute vast fortunes in endowments to colleges and schools and hospitals, in the promotion of scientific research, in gifts to museums and libraries. One very rich man in Philadelphia has devoted his entire fortune of \$60,000,000 to establishing an orphanage—not merely a boarding-house for orphans, but an institution that shall furnish the orphan children admitted to it with an education that will insure their being useful and self-supporting citizens.

When one reflects that the total endowment of Harvard University is not much more than \$60,000,000 the possibilities for usefulness of Mr. Hershey's orphanage with its generous endowment are not easily to be grasped.



MISCELLANY

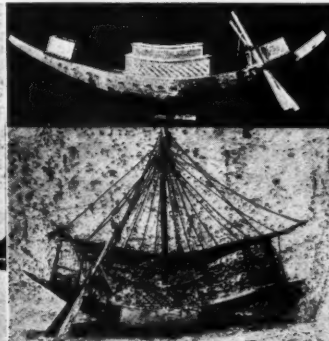


Photos by Times-Wide World

The canopy over the tomb, guarded by four tutelary goddesses



Before uncovering; the shrine-shaped chest with dado of gold



Two of the marvelous model ships found in the tomb



The Canopic chest, decorated with still-legible hieroglyphics



The lid lifted; the four human-headed covers of the jars

A GREAT deal has been written and read about the wonderful things that have been found in the tomb of the Pharaoh Tutankhamen, the only royal tomb opened in Egypt that has proved to be entirely undisturbed by generations of grave-robbers. We have ourselves printed several pictures of the beautiful and costly antiquities that this tomb contained, but we are sure our readers will be interested in seeing the remarkable shrine recently discovered in the inner sanctuary.

The first picture shows the outer casing of the shrine, a graceful canopy of wood ornamented with gold and varicolored paint. On each of the four sides stands the skillfully carved figure of an Egyptian goddess, her arms outstretched as if protecting the shrine against outrage. When the canopy was removed the chest or shrine was disclosed, as

in the second picture, resting on a silver-handled sledge and covered with a dark linen pall. The pall lifted, we see the Canopic chest itself, lovely in its proportions and made of some stone like alabaster. On the corners the four goddesses are again delicately carved, and long inscriptions, the hieroglyphics filled in with black pigment which has scarcely faded at all in thirty centuries, occupy each of the four sides.

The fifth figure shows the chest with its graceful cover lifted off.



Within stand the four jars, each with its stopper carved in alabaster in the likeness of a human head—probably that of the young king himself. These Canopic jars contain the viscera of Tutankhamen; for it was the Egyptian belief that the vital organs, which were removed in the process of mummification, must also be preserved if the dead person were to be quite at home in the hereafter. This chest both in mass and in detail gives proof, if any further proof were needed, of the extraordinary refinement and charm of

Egyptian art of somewhere about the time when the children of Israel were the serfs of Pharaoh.

The picture in the middle shows two miniature ships, which formed part of a flotilla of such little vessels, found, not in the chest, but elsewhere in the tomb. They are facsimiles of the boats in which the Pharaoh and his suite used to make progress along the Nile to and from the holy city of Abydos. It was perhaps believed that they would assist the dead king in journeying through the land of spirits. The lower ship is the guide ship, which was furnished with oars and sail. The smaller craft, above, can only have been towed behind the guide ship. Very likely they were put into the tomb of the young king in order to be used by his departed soul on its voyage to the shores of the hereafter.

King Tut's Canopic Chest

A Beautiful Object Found in His Tomb

The Man amid the Foliage

The Companion's Religious Article

THE world has wasted much pity on Zacchæus. It has conceived of him as a humble soul, small and inconspicuous, whose desire to see Jesus would have been frustrated if he had not been able to find a convenient sycamore to climb.

As matter of fact Zacchæus was probably the best-known and most hated man in Jericho. He was the richest man in the city. He was a shrewd politician who knew how to play subject Jew against master Roman so successfully that he had obtained the fattest patronage-plum in the whole region. He was the superintendent of all the publicans, or tax-collectors. It was a very influential personage who had the curiosity to know Jesus.

The sycamore tree that helped Zacchæus realize his desire was low-branched and thick with foliage. Easy to climb even by a pudgy, well-fed man of middle age, it afforded him concealment with its leaves. The chances are that Zacchæus when he climbed his sycamore was thinking both of seeing Jesus and of not being seen himself. It would have been undignified for an official in his position to be too inquisitive about this new religious leader. Zacchæus never expected to be discovered, least of all to be converted.

But the Master had a penetrating eye. He would not have been surprised to see small boys perched in the branches, but a full-grown man was different. When he pointed out the figure he had detected and inquired who he was, it turned out to be the chief of the Roman tax officers. Perhaps it would have been politic for Jesus to let his discovery go unnoticed. Important people do not relish being caught in ungraceful situations, and Zacchæus did not look impressive trying to play bird in the top of the tree. But Jesus was no respecter of persons. So in a clear voice he called out, 'Zacchæus, make haste and come down, for today I must abide at thy house.'

Jesus is always searching out the man hidden amid the foliage. He has a directness of appeal that cuts through all excuses and makeshifts. He never stops with the externals, but pierces through to the essentials. There is a powerful thrust, as the fencer would say, to the religion of the Master. It finds us, reveals us, shames us.

How dearly we love to secrete our real

selves amid the foliage of conventionalities or traditions or habits! So concealed, our inmost souls are often quite unknown to our neighbors and kindred, sometimes almost to ourselves. But then comes the word of Jesus, and it snatches us out of our hiding-place. It flashes upon us a revelation of what we really are. As we hear him speak we feel how far short of the ideal we are falling, and are stirred with divine aspiration for higher and more God-like things.

Zacchæus surrendered his aerie in the treetop, but he found something better. He found for himself, with the Master's help, a place in the kingdom of God.

Pinkeye

The Companion's Medical Article

THIS is a popular term for a severe and contagious form of conjunctivitis, or inflammation of the outer membrane of the eye. Ordinary conjunctivitis is, as we all know to our discomfort, a common condition. It may be excited by a variety of causes—eyestrain due to uncorrected astigmatism or other defects of vision, overuse of the eyes, by reading or sewing in a light too dim or too glaring, sunburn, a cold wind or one that carries with it dust or smoke, a cinder in the eye, or any other cause of irritation. There is smarting, with a feeling as if gritty particles were rubbing against the eyeball, and the eyes are more or less bloodshot. All symptoms are aggravated by a bright light.

This form of conjunctivitis usually yields readily to treatment by the use of eye-drops of boric-acid solution, by shielding the eyes from the light, and by refraining from reading, writing or sewing.

The disease called pinkeye, which is a contagious inflammation caused by infection with pus-producing germs, is a much more serious condition. It often occurs in epidemic form, attacking all the members of the family, or running through a school or factory. The symptoms are similar to those described above, but much more severe, and there is a discharge of thin, sticky matter. The eyelids are often swollen, sometimes so much as almost to close the eyes.

Recovery usually occurs in the course of a week or ten days, but it may be hastened by treatment. That consists essentially in cleanliness, and washing the eyes frequently with a boric-acid solution. Use an eye-cup or else drop the solution into the corner of the eye and then wink rapidly so as to spread it

over the eyeball and the inner surface of the lids.

The secretion that collects on the lids and at the corners of the eye can be gently wiped away with a pledget of absorbent cotton wet in the boric-acid solution and thrown into the fire as soon as used. All towels and handkerchiefs that the patient uses should be disinfected by boiling. At night smear the edges of the lids with boracic ointment to prevent them from sticking together.

In most cases the use of a solution of one of the colloidal silver salts hastens recovery, but they should only be used under the physician's direction. Cold applications will reduce the swelling of the lids and beneath the eyes, when this is present.



A model railway complete in every detail; the son of a Harvard instructor and his father with the railway they have constructed themselves

The Shady Hill Railway

An Interesting Piece of Model-making

THIS boy is beginning early to learn how to build and operate a railroad. He is the son of Mr. Albert Sprague Coolidge, who teaches chemistry at Harvard University and finds his greatest pleasure outside his laboratory in putting model railroads together. This carefully built line is sheltered in a long wooden building on the grounds of the Shady Hill School in Cambridge, and we need not say that the boys of the school get quite as much fun out of it as Mr. Coolidge does. The road, though necessarily short, has

almost everything that a real railway has. The switches and signal systems are built precisely like those that guide your train whenever you take a journey by rail, and the miniature cars have been made by Mr. Coolidge and his boy pupils in careful imitation of real coaches and freight cars. The locomotives, also built by Mr. Coolidge, are run by electricity, the current reaching the little motors through the rails, which are, of course, insulated from each other. Mr. Coolidge himself is seen in the background of the picture, putting a switch mechanism in order.

A Ceremonial Gift

An American Luxury Reaches Japan

ON her return to Japan after several years in America, Mrs. Etsu Inagaki Sugimoto relates in her delightful autobiography "A Daughter of the Samurai," that she received a call from a neighbor—a lady of the new-rich aristocracy who was very "highkara," to use a newly-coined Japanese word implying everything elegant, fashionable and up-to-date. After the usual bows and compliments the visitor slowly unwrapped a parcel folded in beautifully embroidered crêpe. "It is an age-old Japanese custom when calling upon a friend to take a gift," says Mrs. Sugimoto, "and my guest lifted out and presented, modestly but with evident pride, a large imported paper box on which was printed in fancy English letters:

IMPORTED DAINTIES

A Foreign Delicacy Possessing the Fragrance of Flowers
Used by Ladies and Gentlemen
in the
Cultured Society of Europe and America

"It was a large wholesale package of ordinary chewing gum. The elaborately ceremonious manner of my guest, every movement being in accordance with the strictest etiquette, made the unexpected appearance of that plebeian package a most incongruous and amusing thing."

It represented, quite naturally, the donor's courteous effort to select a gift suitable to the presumably acquired American tastes of her hostess, whose little American-born daughter, after one glance, had to fly the room with an apologetic bow, a murmured "Excuse me," and a strangely contorted countenance. She had been to an American school and knew all it had to teach about chewing gum!

FAHURI'S description of *mara*-fishing interested me, and next morning, provided with a short stick and the bait of land crabs, I set out for a place where the channel curved in close to the north end of Tamanu. The deep water was bordered by vertical cliffs of coral, rising to within six inches of the surface, and pitted with innumerable holes and crannies. Gazing down with the morning sun behind me, I could see fish of every shape and color flitting along the submarine cliffs or peering out of their holes like young swallows in the nest. An hour passed before I sighted what I was looking for. I waited patiently.

Finally, about two fathoms down, at the entrance of a large dark hole, I saw what I knew at once must be a *mara*'s head. The vivid electric blue was unlike the blue of any parrot fish, and the size of the head, with its big golden eyes, told me that the fish would weigh at least a hundred pounds. I moored my canoe to the coral, slipped into the water and swam down with the stick and a handful of broken crab. As Fahuri had predicted, the tenant of the hole was not in sight when I arrived, but I pushed the first course of his meal into the doorway and clambered into the canoe to watch. Five minutes passed. Suddenly the big head emerged with a flash of blue, and I saw that the jaws were munching the food I had left. When they ceased to move I took down a second supply of crab, and this time I saw the *mara* plainly in his hole. In half an hour the fish had lost all fear of me and even moved out a foot or two to seize a bit of crab before I pushed it in to him. I marveled at the creature's beauty and great size; his deep thick body would make a two days' supply of food for the five of us, in spite of Fatu's enormous appetite. At last, baiting my hook carefully, and leaving numerous coils of slack line in the canoe, I pushed the tidbit into the hole and swam to the surface hastily. A jerk released the painter; I threw overboard the coils of line and paddled twenty yards out into the channel. My heart was beating fast as I took in the slack of the line very gently, till I could see in the clear water that it was almost straight. The time had come.

I was so worked up, so eager to capture this huge strange fish, that I gave an involuntary shout as I struck, once, twice, to set the hook, and then a heave with all my strength to pull the *mara* from his hole. The second pull fetched up against a tremendous weight, alive with the thrill and quiver a fisherman loves. Next moment the fish was out of his hole and under my canoe—plunging down madly into the depths of the channel. I tried to snub him. It was like snubbing a running steer. The stern of the canoe, where I was sitting, went under water; she was half filled before I had sense enough to slack away.

Four times, putting all the tension I dared on the line, I brought the great fish so close to the surface that I could see his body flashing back and forth; each time, wild with alarm at the sight of the canoe, he put his head down and rushed for the bottom while the line hissed through my hands. But his struggles and the steady pull I maintained were exhausting him, and at last I had him on the surface alongside—too far gone for another rush. Paddling with one hand and holding the fish on a short line with the other, I towed him to the shallows, jumped overboard, and passed the end of the painter through the great panting gills. A heave and a slide took him over the gunwale, and he lay flapping ponderously in the bottom of the canoe. I gave a second shout and did a few steps of a war-dance, which terminated by planting an incautious foot on a sea urchin.

It was then that I realized that I was almost as tired out as the fish and that my hands were badly cut by the line. But I thought little of my wounds as I paddled

exultantly back to camp, admiring the strange and beautiful creature at my feet. He was an enormous wrasse,—akin to the familiar tautog of the New England coast,—and I knew from the size of his scales that he was a true *mara* *tea*—the archer's *mara*.

As I drew near our camp I gave an imitation of the weird yodeling call of the native fisherman, returning with an exceptional catch. Fahuri dropped his work and came

inches through—was lashed in place, parallel to the hull and about eight feet distant on the port side.

"She is handsome, eh?" Marama asked, with the pride of a workman who loves his work; "and look! We have given her a name!" He pointed to the bow and there, neatly carved in the rich *ati* wood, I saw the word *Tamata*. The name, which means "try," struck me as remarkably apt. Fatu



I watched Fatu pull himself down the stay to the level of the deck and swim off deliberately among the purple shadows

[PAGE 380]

down to the beach, and the others followed. "Fat!" he exclaimed with glistening eyes.

"This fish will be like butter on our tongues! It was I who taught Tehare how to catch him; now you will see that Fahuri knows how to cook the *mara* as well! In heathen days this fish was taboo to all but those of chiefly blood—too good for common men! I shall bake him whole in the oven like a pig and serve him with a rich sauce of clams and coconut."

Fatu smiled. "And this is the day for a feast," he said; "our canoe is ready to be launched! Come, all of you—it is only half an hour's work. Then let us take the rest of the day off and enjoy ourselves. In another week we shall be ready to set sail!"

CHAPTER THIRTEEN The Westward Voyage

OUR little vessel stood ready for the sea. Her mast was stepped and stayed, and the big sail of matting, which had cost Fahuri so many weeks of work, was laced to its boom. The outrigger—a twenty-foot log of light corky wood, ten

was trundling half a dozen rollers in our direction, with pushes of his bare feet.

The launching was quickly done, for the natives are clever at moving heavy weights. A heave and a pry with a stout pole—a run on the rollers—a halt while the ones behind were being brought to the bow once more—a final shout from all hands, in which Lem's shrill Chinese voice joined—and the *Tamata* floated lightly on the quiet lagoon. Fatu had an anchor ready,—a heavy block of coral through which his axe and marlinspike had drilled a hole,—and when we sat down to our midday meal, I could not resist glancing up from time to time for a look at the graceful little sailing-vessel riding at her moorings before the house.

The skipper called me aside after lunch. He patted his great muscular stomach with a hand like a ham. "Aué!" he remarked with satisfaction. "I have never tasted better fish. And there is enough left for tonight and tomorrow! But I want to talk with you. We are near ready to sail for Tahiti, and we must try to think of everything. See if you can help me. We need a pair of bailers, paddles and at least one big steering-sweep; some-

thing to carry a few gallons of fresh water in; and a supply of food. For the last we can load as many husked coconuts as the canoe will carry—we can eat them and drink water, too. Then we must make some bonito hooks in case we have the luck to run into schools of fish. What else can you think of?"

"Why not dry a supply of fish before we start?"

"Can it be done without salt?"

"I think so; the air on the low islands is very dry."

"Take Marama then, and see what you can do," said the skipper.

The dried fish was a success, as I had hoped. We cut thin flakes of the flesh and hung them in the sun like clothes on a line. Each night, to avoid the dew, the growing pile was brought indoors, and we found that four days of the hot, almost equatorial sun was enough to make the fish almost bone-dry. In this state, if kept free of moisture, it would keep for many weeks.

IN moments of leisure, Marama and I worked on our bonito hooks, and we made them with the care of a jeweler stringing pearls, for their success might mean life to us in the last extremity. They were three in number, made of tortoise-shell. The lures that went with them we got from the central part of pearl-oyster shell.

While we dried fish and worked on our bonito tackle, Fatu hewed out paddles and a pair of big wooden scoops for bailing. A supply of water was our most perplexing problem; there was not a barrel, a cask or even a kerosene tin on Iriatai. But old Fahuri, prowling about the north end of Tamanu, found a tree that had been snapped off by the hurricane. The heart of the stump was rotten, with a shell of sound wood all around, and, probing down with a sharpened stick, he found that the rotten heart gave way to sound hard wood about a yard above the ground. It was a natural barrel, needing only a little shaping and hollowing out with the adze, and the addition of a tight cover, to make us a twenty-gallon water container, which would stand amidships, lashed to a thwart.

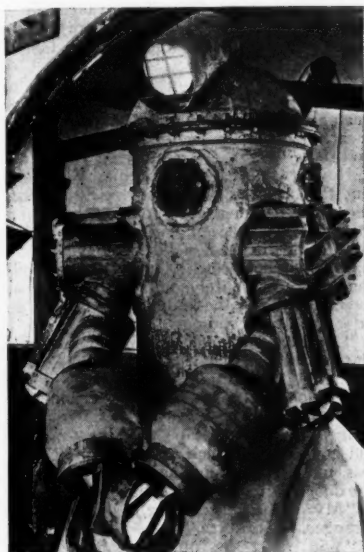
Lem built up the fire before daybreak on the day of our departure and all hands had a tuck-in of cooked food—our last for some time to come. There was no place to build a fire or carry fuel in the canoe. In the morning calm, while the sun made its appearance on a cloudless eastern horizon, we paddled down the lagoon toward the pass.

I could write a book about our voyage in the sailing-canoe. It was an experience to look back on with satisfaction, but one I should not care to repeat. The memory of those days aboard the *Tamata* will always be fresh in my mind: the grand going we made before the trade wind; the roasting seven-day calm, when we ran out of water and food and should have died except for the migrating schools of fish that darkened the surface of the sea for miles, and the northwest gale that came at last, with squalls of rain that filled our keg. That was a storm to weather in a craft like ours! We might have run before it, taking turns at bailing and wielding the big steering paddle aft, but we grudged every mile lost, and rode the storm out to a sea anchor improvised with the spars and Fahuri's stout sail of matting. Head-on to those great breaking seas, it was a case of bail for our lives, day and night, and we kept the *Tamata* afloat by a series of miracles. At last, when the gale abated, and no more water came aboard, we dropped like dead men in the bilges and slept for a day and a night. When we awoke, our little vessel's bows faced the rising sun, and a brisk easterly wind sent the whitecaps slapping against her sides. Our water keg was full, but we had no more food.

[CONTINUED ON PAGE 397]



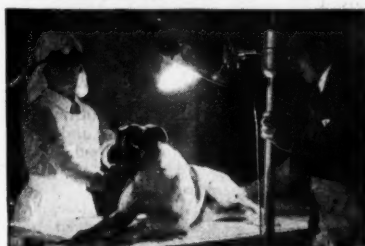
THE MARCH OF SCIENCE



Diving for Treasure

Armor for the Seeker after Sunken Gold

IN this enormous fourteen-hundred pound diving outfit H. L. Bowdoin of New York expects to begin soon on the task of salvaging sunken treasure. Particularly will he seek to recover the five million dollars in gold and jewels that have lain at the bottom of the sea since the steamship Lusitania was sunk by a German submarine off the coast of Ireland in 1915. Note the powerful light which will help to pierce the gloom three hundred feet below the surface of the sea. (Photo by Fotograms)



Sunbaths for Greyhounds

A New Luxury for Blue-ribbon Canines

AT Wembley Stadium, in England, is a famous greyhound racing course. Now added to its equipment is a complete dispensary and operating theater, for caring for every type of sickness or injury to which greyhounds may fall heir. The photograph above shows a greyhound receiving ultraviolet-ray treatment from one of the quartz-mercury lamps which throw off the so-called vital rays. (Photo by Keystone)

Two Modern Franklins

Experimenting with the Energy in the Sky

IN the Swiss Alps two intrepid young scientists are hoping to draw from the sky five or six million volts of electricity—enough, they believe, to disrupt an atom. Their undertaking is fraught with danger; there is no telling whether, if this enormous amount of energy can be obtained, it can be harnessed and controlled. As a precaution, they will view their experiments from a lightning-proof fortress. (Photo by Wide World)



How Your Phonograph Records Are Made

A Set of Photographs as Good as a Trip through the Factory



HERE is a set of unusual photographs which show you with remarkable clarity the steps in the new electrical process of recording the music of great artists and making it available on the phonograph in your home. Electrical methods of recording go under such names as "orthophonic," "viva-tonal" and the like and produce results never possible with the old acoustical method. Study the group of photographs as they go down the column, and this is what you will see:

First, a group of symphony players in the studio. They are not broadcasting; the microphone is used only to pick up the sound and transmit it to the recording machines.

Next, you see the control board at which the operator is adjusting the electrical amplification of the music so that the vibrations it sets up will make grooves of exactly the right amplitude in the master record. Next you see a skilled workman supervising



the cutting of the master record—a wax disc which he studies continually through a microscope. The final photograph shows you what your own records would look like if you could see them through a high-powered microscope. The smaller strips of white between the black lines are the grooves in which

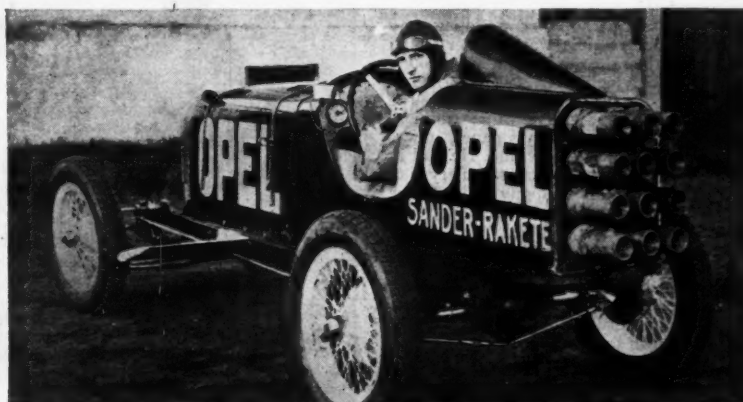
ing the cutting of the master record—a wax disc which he studies continually through a microscope. The final photograph shows you what your own records would look like if you could see them through a high-powered microscope. The smaller strips of white between the black lines are the grooves in which

Driving an Automobile with Rockets

German Inventors Have Applied an Old Principle in a Brand-new Way

WHEN you fire a gun you feel a jar on your shoulder. It is the recoil. The explosive not only propels the shell out the muzzle; it tries to drive the gun backward, too. In Munich, Germany, clever inventors have applied this "rocket principle" to driving an automobile. The pipes at the rear of the strange car shown below are filled

with high explosives. When they are fired, the recoil from the rush of gases through the tube actually drives the automobile forward. Recent tests showed that the car could attain, from a standing start, a speed of sixty miles per hour in eight seconds. Not comfortable, perhaps, but certainly effective. (Photo by Wide World)



London's Fog Measurer

One of the Busiest Men in the World

THE photograph above is that of Dr. J. C. Owens, whose title is nothing less than "Superintendent of the Advisory Committee on Atmospheric Pollution, of the Air Ministry, Meteorological Office." One of his chief concerns is to measure the density of the fogs which so often sweep down on London, and he is shown above with one of his precision instruments. Fogs are caused usually when the air above warm, moist soil is colder than the soil itself. Moisture in the atmosphere condenses into small hollow particles of water, which stay suspended in the air. (Photo by Keystone)



Books That Talk

Radio Brings the Blind a New Aid

THE Visagraph is the name of a new device to aid the blind in reading. Books printed in "Braille" or raised type, are still necessary, but the reader, instead of reading the letter by passing his fingers over it, receives vibrations from a radio set. A photo-electric cell picks up a light image from the raised letter and transmits it through tubes to a radio loud speaker. (Photo by Fotograms)

A Great Tunnel

President Coolidge "Holes It Through"

RUNNING straight as a die through the mountains which give it its name, the Cascade Tunnel of the Great Northern Railway was "holed through" not long ago when President Coolidge threw a switch in the White House and thus set off the last dynamite blast which opened it from end to end—a distance of 7.79 miles. This new tunnel, the longest in the Western Hemisphere, is a part of the Great Northern Railway's \$25,000,000 program of improvement.



VIRGINIA'S BANDIT

[CONTINUED FROM PAGE 374]



Virginia could see in imagination Mrs. Newhard's smiling face

This is all a dream. I shall wake presently and be in my bed."

CHAPTER FOUR

"He Must Have a Chance!"

ON Tuesday morning Virginia did not wake with the first gray light of dawn. The sun was high in the clear sky before she opened her unwilling eyes and lay looking about her. She was not in her own bed, with a soft pillow under her cheek. She lay upon the settle in the kitchen, and she was still dressed. For a moment she could not decide where she was; then, hearing a sound from across the hall, she recalled the startling events of the night.

Instantly she stood up. She had intended, before drowsiness overcame her, to lock the bandit in, but sleep caught her, as sleep does, unawares.

The stranger still lay on the bed, quietly and on his right side. His eyes were open, and he tried to turn so as to look round, but his shoulder was clearly too stiff and painful for him to move. She went to the far side of the bed, where he could see her without turning. He had the look not only of a wounded man but of one utterly exhausted.

He regarded her steadily, then began to blink his eyes rapidly as though her image were not clearly defined.

"Where am I?" he asked. Virginia noticed for the first time a resemblance in his voice to the voice of someone else, but she could not tell whose.

"You're at McIntyre's." "McIntyre's?" He repeated the word as though it gave him some mysterious satisfaction.

"What is your name?" "My name is Donald Barrie."

Virginia looked at him suspiciously. That was a sort of moving-picture name; doubtless it was assumed.

"Where did you come from?" "I can't tell," he said thickly. "I can't tell."

His eyes remained closed; they seemed to sink into his head. He had had no food—no wonder he was weak. Virginia fetched a cup of milk from the refrigerator, and with it a spoon. Dissatisfied with her slow service, the stranger tried to seize the cup and lift it to his lips. She held it sideways, and he succeeded in getting a deep draught.

"More!" he demanded loudly. "More!"

Virginia gave a start. Last night she had raised two of the three windows, and the sound could easily travel through the shutters, which had fixed slats in the upper half. Moreover, light might show to one who was close at hand. She lowered the windows and turned out the light. The room was faintly illuminated by bars of sunshine which came in between the slats. With the windows closed the air began immediately to be intolerably close. She lifted one sash.

"You must be very quiet!" she said, returning to the bed.

The stranger made no further sound. She laid the clothing back from his shoulder—the inflammation was spreading in spite of the copious application of liniment.

"I can't let him die!" she thought distractedly. "But if I call Doctor Oliver, he'll report him. If I call, a procession of relatives and friends passed before her eyes,—if I call Uncle John, he'll report him.

And Uncle Henry! Perhaps he'd rather die!" She shuddered profoundly—he might prefer this sort of death to another! "I'll wait till noon," she decided.

She heard a pounding at the kitchen door. Someone tried the latch, shaking it furiously. She was about to answer, but on second thought she ran up the steps to her bedroom and called out the window.

"What is it?" "Are you in bed yet?" asked Foltz. "Of course not!" "I'm going to town. Want anything?" "No, thank you."

"I'll bring back the news," promised Foltz. "I expect they've caught him, worse luck for me! Don't you hear your phone ringing?" "Yes, I hear it."

Virginia ran down the steps. "Wergie!" "Yes." "Is your Mom there?" "Not at this minute."

"You tell your Mom, Wergie, that you shall stay by me tonight. I can't be alone. I fear me for this bandit."

"What?" asked Virginia. "Tell your Mom you shall stay by me tonight."

"I don't know if I can, Mrs. Newhard. I'll let you know."

"Well, you phone up."

Virginia hung up the receiver, though she knew that Mrs. Newhard had not reached the end of even her introductory remarks. The phone rang immediately; she continued on her way across the room. She measured coffee into the pot and added water. Coffee! That would set her up! The pot boiled quickly, and she carried a cup in to the stranger. He was awake now; at least his eyes were wide open and very bright.

"Where am I?"

"You're at McIntyre's."

"McIntyre's?" Again the idea of McIntyre's seemed to give him satisfaction.

"That's my name—McIntyre."

Virginia put a teaspoonful of coffee between his lips. He responded with a shudder.

"What are you giving me?" he asked roughly. "I want water."

Virginia fetched a glass of water. He drank half of it, spilling the other half. "More!" cried he. "Colder! Much more!" His lips were parched, his face aflame.

"I can't wait till noon," thought Virginia. "I must call Doctor Oliver. But I'll see what news Foltz brings."

She stood looking stupidly about. She was afraid to leave her patient; she was afraid to stay in the kitchen, because Foltz would open the door and walk in.

SHE decided at last that she would go into the garden and pick currants; there she could command the kitchen door, and anyone coming to the house would see her in the garden and come thither. She took her large basket and her small basket and went hatless into the hot sun. She had scarcely reached the currant bushes before Mrs. Foltz waddled down the path, a child on each hand.

"The kids are afraid to stay alone," she explained. "They think the bandit'll get them. I come to borrow your colander. You stay here; I'll get it."

"I'll get it," insisted Virginia, terrified. She flew into the kitchen and out. "Here's the colander!"

Mrs. Foltz took up her waddling way toward home. Virginia watched her round the corner; then she ran into the spare room. The man was lying quietly. She returned to the garden. She heard in a few minutes the sound of Foltz's car. He came running, waving a paper—yesterday's paper, it was true, but none the less exciting. He had in addition fresh news: the constabulary had secured bloodhounds. Happily Chief Ferris was no worse. Foltz aimed an imaginary gun; he danced about.

"Don't you have any work?" asked Virginia sharply.

Foltz flushed red; there was plenty of work. At eleven o'clock she heard the sound of the postman's horn and, locking the kitchen door, ran down to the gate.

"He ain't caught, but they're on his track," called the postman. "They think he may have gone around the town and come

this way to get over to the hills. Better keep the doors locked."

Virginia heard a thundering rap on the back door.

"Why do you keep your door locked?" asked Mrs. Foltz. "I come for a fine strainer."

"Did I lock it?" said Mrs. Foltz.

"You're afraid!" said Mrs. Foltz.

"Here's the strainer."

Virginia handed it out and closed the door. Did Mrs. Foltz look at her suspiciously? There not only was a large reward for those who found this criminal; there was also a heavy penalty for those who sheltered criminals.

She crossed the hall to the spare room. Noon was almost at hand. Outside the air was intensely warm; here it was cool enough, but heavy, almost unbreathable.

"I must call the doctor!" she said desperately. "I can't put it off any longer."

The stranger moved his lips; he constantly pressed his right hand to his injured shoulder. He opened his eyes and stared at Virginia.

"Hello, Mother!" said he distinctly. Unsentimental, unromantic Virginia began to cry.

"They shot me," he complained in a querulous tone. "Queer!"

"No, not queer," said Virginia to herself. In the middle of the afternoon came a ring of the telephone. It had rung many times, but she had not responded. This ring was long-continued, insistent. She lifted the receiver, expecting to hear a familiar "Wergie!" But it was not Mrs. Newhard; it was Mrs. McIntyre, speaking from McConnellsburg.

"Virginia?" "Yes."

"This is Mother. Your voice sounds strange."

"I guess it's a poor connection."

"If everything isn't all right, I can come home tomorrow. Aunt Susie's better."

Virginia saw her mother's eyes, heard her mother's positive voice, condemning the evil-doer.

"Oh, don't come!" said she. "You're sure you're all right?"

"Oh, yes; I'm all right."

Mrs. McIntyre was thrifty; she hung up the receiver with a short "Good-by, then."

Virginia clung to the hook of the telephone. The bell buzzed in her ear.

"Hello, McIntyre's!" "Yes."

"I have a telegram for Miss Virginia."

"Yes?" "Send Kincaid to Fairfield Friday. Father."

Kincaid! She saw the blue eyes of the steady Scotchman. This was Tuesday; he was to arrive on Wednesday. He would know what to do!

She turned from the

phone. Foltz stood before her in the kitchen.

"I thought I heard a voice talking."

"You did," said Virginia promptly. "You heard me."

"The reward's yet bigger," he announced. "Fifteen hundred! Alive or dead. Better dead than alive, I'll say. A fellow like that wouldn't let himself be taken alive, believe me! And he wouldn't care who he killed, neither. You know them Lemur brothers? They—"

"I'm very busy," interrupted Virginia. "I'm making jelly." The heaped basket of currants on the table bore out her statement. "This is no time for any of us to stand and talk."

Having locked the door behind Foltz, she put the currants on the stove. Exhausted, she sat down in a deep rocking-chair, and instantly was asleep. After a long time, roused by the odor of burning, she sprang up. It was four o'clock! She rescued the boiling juice; fortunately only that which ran over the sides of the kettle had burned. The odor was all-pervading.

"Nobody can smell that liniment now!" she said with a nervous laugh.

She put her jelly into the glasses and ate her supper. It was now six o'clock, now seven, now eight. The telephone rang; it rang again, again. A part of the time she did not hear. The sick man grew more restless, moving his hands and feet. Foltz tried the door and went away, supposing her gone.

"My name's McIntyre," declared the stranger. "McIntyre."

"You must be quiet," said Virginia twenty times.

She slept, she woke and slept again. She heard the clock strike ten, eleven, twelve; she did not hear one or two. She dreamed, her head laid uncomfortably on the back of the chair, of Foltz in armed pursuit.

"He must have a chance," she muttered, "a chance!" and fell asleep once more.

CHAPTER FIVE

Virginia Carries On

THE stranger lay flushed and still on the high bed, and Virginia stood pale and still beside him. It was Wednesday morning, and dawn had come. The stranger moved his hands incessantly; Virginia believed that if it were not for his wound he would spring from bed. Frequently he tried to turn, but his shoulder seemed immovable. He would have nothing but water to drink and would eat no solid food.

"He's weaker," said Virginia.

When the telephone rang, she turned and looked at it in angry confusion. Weariness and

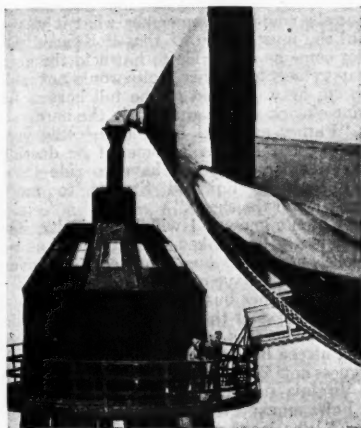
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Mrs. Newhard depended upon the telephone for her entertainment



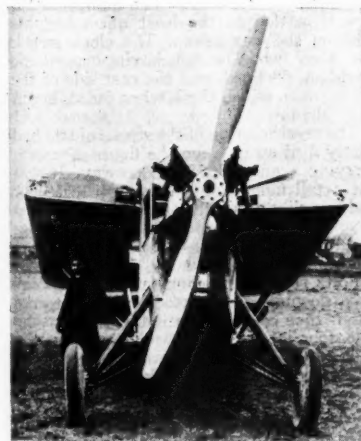
THE NEWS OF THE AIR



England to America

The R-100, Now under Construction

ABOVE is a miniature model of the R-100; a giant dirigible which is being built under the supervision of the British Air Ministry, presumably for service between London and New York. The model shows the means by which passengers will embark and disembark at landing fields. You are able to see the gangway through which passengers pass from the tower into the cabins of the dirigible—somewhat lower than the point at which the ship is moored. Compare this system with that described for the City of Glendale elsewhere on this page. (Photo by Wide World)



"Fairchild-Caminez"

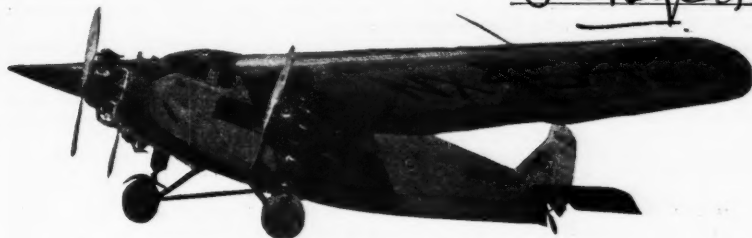
A Plane Built for Endurance

HERE is a remarkable plane. It is built by the Fairchild Aviation Corporation and is of the folding-wing type that is now becoming fairly common, due to the much greater convenience of handling and storage on the ground. The most remarkable thing about it, however, is its power plant. It has the so-called Caminez engine, the remarkable design of which permits crankshaft and propeller to revolve at half the normal piston speed. This is an advantage in many ways. Engine power is greatest, of course, at high speeds, but propeller efficiency is highest when the blades are long and the propeller can revolve comparatively slowly. The Caminez engine suits both conditions. With three passengers such an engine will drive a plane at ninety-five miles per hour and use only five gallons of gasoline in an hour—economy better than that of most automobiles. (Photo by International)

Commander Byrd says—

IT is my firm conviction that the future of America is inextricably bound up with that of aviation. Anything which will bring home to young people, not only in this country but all over the world, the vast importance of this newest triumph of our civilization, and encourage them to play some part in its unparalleled future, deserves the earnest encouragement of everyone connected with aviation. I have seen nothing better calculated to do this than the department, The News of the Air, which The Youth's Companion inaugurates in this issue. To its readers I extend my congratulations.

Byrd



An American Plane for Polar Cold

The Ford All-Metal Monoplane for the Use of Commander Byrd

THE impressive machine above is the remarkable monoplane built by the Ford organization for Commander Byrd's Antarctic expedition. It is similar to the standard Ford commercial plane, type 4-AT, but extra gasoline tanks are concealed in the wings and fuselage, and the cabin has been altered to suit the special conditions of polar flight. It is with this plane that Commander

Byrd will probably make his flight to the South Pole and return. Fully loaded, it will weigh five tons, and with that weight its three Wright Whirlwind motors will produce a speed of one hundred miles an hour. The wings and fuselage are constructed entirely of metal, the very light and strong copper-aluminum alloy known as duralumin being used for that purpose.



Safeguard for Pilots

A "Four Purpose" Indicator

HERE is a model of the Aërovane, a new device designed as a guide for pilots. It tells them (1) the name of the town over which they are passing, (2) whether they are on the direct route, (3) the direction of the wind, and (4) the true north. The actual aërovane is over twenty feet high and is built of steel. The top marker is fourteen feet long and four feet wide. In normal weather it will be visible from a height of three thousand feet. The photograph shows Capt. Stephen Day with a model of the device. (Photo by Wide World)

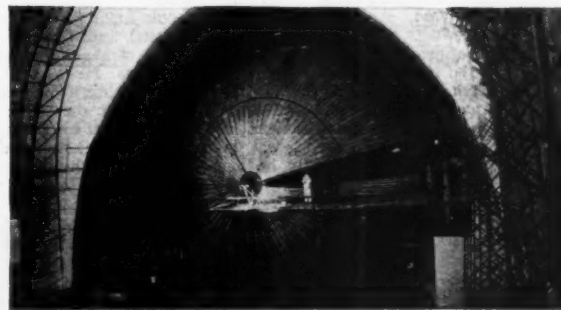
The All-Metal Dirigible Nears Completion

An Amazing Craft Is Groomed for Her First Flight

THE eyes of the aeronautical world are turned, these days, on Glendale, Calif., where the amazing dirigible described briefly for you on one of our recent March of Science pages is now rapidly nearing completion. Three factors make this craft unique. She is constructed entirely of metal. She is to be driven by steam. She will utilize elevators to load and unload her passengers and will not be moored to a mast.

The photograph gives you a clear idea of how nearly

complete the City of Glendale is now and how spectacular will be her appearance. (Photo by Wide World)



ALMOST a quarter of a mile long, three hundred feet wide, and towering seventy to eighty feet above sea—these are the imposing dimensions of a series of great landing "fields" that an engineer proposes to string across the Atlantic at intervals of four hundred miles. And, far from considering the plan visionary, business men have formed a \$2,500,000 corporation to construct these havens.

A Haven for the Ocean Flyers of the Future

An Inventor Proposes a Daring Plan for a Mid-Ocean Landing Field

The inventor of the seadrome, as it is called, is Mr. Edward R. Armstrong. For fifteen years he has been at work on his idea, and to scoffers he offers seemingly incontrovertible proof of the scientific soundness of his plans. The photographs below

give you a graphic idea of the seadromes. At the left is a scale model, with a model of a liner to show comparative size. At the right is a photograph showing Mr. Armstrong lowering one of his models into the water. For anchorage the seadrome would utilize the effect that Mr. Armstrong refers to as "base suction," and cables would extend to the ocean floor—sometimes a distance of as much as three miles. The landing surface would be supported, as shown, by slender steel columns, at the bottom of which would be floats, which would stay at such a depth below the surface that the most violent storm on the surface of the sea would still not disturb the quiet water at the deeper level where the floats are submerged. Solidly supported, the surface of the seadrome would, it is stated, remain stable under all circumstances.

The seadrome would contain a hotel, complete refueling and repair stations for the planes, radio beacons, and weather-forecast stations. They would stretch from a point near the Atlantic seaboard to the Azores, and thence to Europe, the last one being so placed that planes could diverge from it to Ireland, Portugal, England or France.

Certainly, barring some invention which will make it possible to discover a more concentrated fuel, non-stop ocean flying in lighter-than-air machines will not be commercially useful for some time to come. Such mid-ocean havens as Mr. Armstrong proposes would, if their construction turns out successfully, split the long journey into a series of relatively short hops which present aircraft would find it easy to make.



VIRGINIA'S BANDIT

[CONTINUED FROM PAGE 394]

anxiety had weakened her power of invention when she was answering questions.

"I don't like to tell lies," she muttered. "Perhaps I've told some already."

She decided that she would not go to the telephone; then she forgot her decision and walked thither.

"Wergie!" said the voice of Mrs. Newhard, though it was not yet six o'clock. "Are you all right again?"

"Yes," said Virginia, puzzled. What excuse had she given Mrs. Newhard for not spending the night with her?

"I guess you worked too long in the sun. Tell your Mom she oughtn't to work you so hard. Did you hear anything?"

"About what?" asked Virginia. She was not pretending—at this moment she could remember nothing.

"About the sief!" cried Mrs. Newhard. "About the bandit what robbed the post office! You sure didn't forget, Wergie!"

"I haven't heard anything new. Wergie!"

Virginia made no answer.

"Ach, she's already gone!" muttered Mrs. Newhard.

At seven o'clock the phone rang again. Virginia had given the patient a little bread and milk and a great deal of water and had herself consumed two cups of strong coffee. She felt revived and somewhat cheered; Kincaid might come at any moment, and to him she would pass all responsibility for her charge. She went to the telephone feeling equal to answering any inquiry.

"That you, Virginia?" This was Nell's voice. "How are you?"

"All right."

"Did you know they think the bandit has come this way?"

"He has!"

"They're going to make a thorough search. They have a lot of extra men."

"How are you getting along?" asked Virginia quickly.

"That was what I meant to tell you. I believe the children are all taking the whooping-cough. Hear 'em?"

"I do."

"So long!"

Virginia put in order the few matters in the house which were out of order; then she went to the door and looked up the road toward Gettysburg. When she came back she visited the spare room. The shoulder of the patient should be dressed; she went to the door again, hoping to see Kincaid. Having looked in vain, she returned to the four-post bed.

The wound appeared to her no better, but it also appeared no worse. The odor of the strong antiseptic made her feel ill. She walked to the porch; she would dress the dog's foot again—that would account for the odor if Foltz inquired. The dog was not on his bed of burlap—apparently he had recovered enough to seek his home.

Returning to the kitchen, she burned sugar in a pan.

"Deceiving is beginning to come easy," she muttered.

Ten times in the morning she walked to the door but saw no Kincaid. On the last journey she stopped by the table in the living-room, and there she stood a long time. When she looked at the clock a half-hour had passed.

"Can it be that I'm sleeping on my feet?" she said.

She crossed the kitchen and regarded herself curiously in the mirror which hung between the two windows. She looked pale, haggard, aged.

SUDDENLY Virginia jerked her head sharply to one side—the telephone bell was ringing loudly. It continued to buzz after she had lifted the receiver.

"Virginia!"

"Yes."

"The police are coming this way, at least half a dozen on motorcycles. They're combing the county. Perhaps they'll search the houses and barns. Look out for them!"

"Ting-a-ling!" said the bell again.

"Yes," said Virginia.

"Wergie!"

"Yes," Virginia spoke in a grim tone.

"Do you know anything?"

"Nothing," replied Virginia truthfully.

She stood for a moment where she was, alarmed at the blank in her mind; then, crossing the room, she lifted from the table one of the volumes which had come in the mail. At the end of ten minutes she had not read the title.

Then she locked the doors. Though it was afternoon, she must sleep—there was no other way. She set the alarm for six o'clock and, placing a rocking-chair before the spare-room door, sat down, the clock in her lap. If Kincaid came, he would make enough noise to waken her; if the constabulary came to search the house, they would be even more certain to waken her.

It was the clock which woke her. She hushed its loud and faithful peal, then rose and bathed her face in cold water and made herself fresh coffee. She looked out the window—at the front gate two officers on motorcycles stopped to talk to Foltz. Foltz shook his head, "Not in our barn!" he shouted, and the officers passed on.

The stranger seemed to become slightly conscious. He turned farther on his side, and Virginia's housewifely instincts suggested that she make the bed neater. She ran upstairs and came down with sheets over her arm. In the doorway between the kitchen and the hall stood a man. She was about to call frantically "Go back to bed!"

when her throat congealed. The man was not the sick man, but Foltz, and his eyes were fixed upon the spare-room bed. With feet which seemed to drag, but which really traveled swiftly, she came to his side.

"What do you want?"

"I just came to ask if you saw the police."

"I did." She looked over his shoulder—the spare-room bed was empty, not only of its occupant, but of all its clothes above the lower sheet.

"I'm making up the bed," she explained steadily. "When my mother comes, she's going to bring my aunt Susie with her."

Foltz backed into the kitchen.

"You have a fierce smell here!"

"Haven't I?" Virginia spoke almost gayly. "My poor dog's gone. I've been trying to burn out the smell of liniment with sugar."

"The police are searching all the barns. I told 'em I'd searched here." Foltz stepped out to the porch.

When he had gone Virginia stood paralyzed. "Did I unlock the door without knowing it?" she asked. "Is he gone?"

Leaning on the edge of the table, she helped herself round to the other side. She tottered to the door and caught hold of the frame. The sheets on her arm opened and trailed round her feet. She crossed the hall. She had not been mistaken—the bed was empty. She walked round to the far side. The stranger had rolled to the edge; now, wound in sheets and coverlet, he lay on the floor in the corner. Here the electric light did not shine; Virginia fetched a candle and looked down.

"I can't lift you back!" she said frantically. "That's certain!"

CHAPTER SIX

Foltz Makes a Find

IT was Thursday morning and the desperado still lay upon the floor. He made no further effort to rise, but in his dark corner either muttered or moaned continuously.

It was six o'clock in the morning and Virginia stood looking down upon him. Then she knelt down, her motions lighted by a candle on the window-sill, and coaxed him to take a little bread and milk. She was encouraged; he ate all that she brought him—that was a good sign. But a good sign was a bad sign—what would happen to him when he recovered? She had no hope that he could escape.

She had wearied her eyes in vain looking for Kincaid, but she went to the door and looked again. He might have come into Gettysburg in the evening and be on his way out now. She saw the constabulary

speeding by on their motorcycles. Sometimes there were two, sometimes three.

She stood by the kitchen table trying to pare potatoes; she walked into the spare room and looked into the dark corner; she returned to the kitchen and stood idle. She approached the stove and turned away. There was something she must attend to, but she could not remember what it was—ah! she must tell Foltz that if Kincaid did not come he must ride to Fairfield the next day to meet her father. Foltz would not wish to go; he was afraid of the tall horses. At nine o'clock she sought him in the barn.

"Father expected Kincaid to come yesterday, but he hasn't come. If he doesn't come tomorrow, you'll have to ride Luce and Lady to Fairfield Station to meet Father and the sheep."

"I don't know if I will," said Foltz, impatiently. He looked sharply round as he spoke, first over one shoulder, then over the other. "I have other business."

"What other business have you?"

"If they start this rascal up in the woods and he runs this way, am I going to hand that fifteen hundred over to somebody else? I guess not! Why, he might be in the house!"

Virginia turned away. "That's foolish!"

Foltz unexpectedly stepped in front of her. "What's the matter with you, Virginia? You look sick."

"I'm not sick," Virginia tried to speak coolly. She kept on her way; the house seemed to have moved from its foundations and to be still moving, farther and farther. She reached the porch at last, then the cool interior. The day was likely to be fearfully hot.

It was ten o'clock, eleven, twelve. The stranger lay more quietly. When she went in at one o'clock, he asked her the first intelligible question of many hours. "Where am I?"

"You're at McIntyre's."

"McIntyre's!" He uttered only the astonished and apparently pleased repetition of that single word.

"Today they'll come," said she aloud when she had returned to the kitchen. She laid her head back upon her chair, and before it settled to the least uncomfortable position she was asleep. The clock struck one, then two. The sun, having passed the meridian, declined, and the east side of the house, upon which the kitchen faced, began to be shadowed.

The reverberation of the stroke of two had barely died away when the figure of a man carrying a gun filled the doorway. It was not a tall figure, and a little distorted, it had a warlike and evil look. If there had been anyone awake, it would have been recognized in a moment as that of Foltz, but there was no one awake.

Foltz stood for a moment studying Virginia sleeping; then he took a step into the room, then another, until he stood inside. The door into the hall was closed, but the door into the living-room was open, and this was to be reached by walking behind Virginia's chair, in every way a desirable course.

As he passed back of her chair, Virginia lifted her head. To her dimmed vision the room seemed to be exactly the same as when she had closed her eyes, and so it was.

"All right," said she in a sleepy voice. "It's all right."

Standing in the living-room, Foltz remained motionless for a long minute, then, as if Virginia's remarks encouraged him, he stepped on. He peered behind a sofa placed across the corner of the room; there alone could anyone be hidden. He stepped into the hall. He glanced toward the closed doors of the parlor and the spare room—he would look into them as he came down. The attic was his goal; there he believed the miscreant lay.

Halfway up the steps he halted, startled almost out of his wits. But it was only the telephone bell. It rang again and yet again, but it did not rouse Virginia. He tiptoed on.

Virginia had opened her eyes when the telephone rang and had promptly closed them. When she did wake, it was not with a start, but with a gradually quickening consciousness that something was seriously wrong. She opened her eyes, closed them and opened them again. The steps creaked; roused, and lifting her head, she listened. Foltz stood still. She slept again.

HAVING found no bandit in attic or bedrooms, Foltz descended to the first floor and opened the door of the parlor. By the time Virginia was again awake he was again standing still. He found nothing in the parlor except furniture and a

[CONTINUED ON PAGE 401]



As Virginia was pouring the liquid on the foot of the dog, Foltz came round the barn

[PAGE 372]

THE DERELICT

[CONTINUED FROM PAGE 392.]

I learned at that time that primitive men have senses or faculties lost to us. We had no compass, no sextant, and no log, and the storm had blown us far out of a course that seemed to me pure guesswork in the first place; but when we rigged mast and sail once more Fatu took the helm as confidently as if land were in sight. "Tahiti is yonder," he remarked, with a wave of his great arm. And I learned afterward that he would have made his landfall in due time.

The natives have ways of recognizing the vicinity and direction of land which seem mysterious but are quite rational when explained. They know that certain sea birds fly out from land in the morning, and return to roost at night; that schools of certain small fish, hatched out in the open are to be found heading for the land; that clouds piled and massed in certain ways indicate the presence of high land beneath. But the sense of direction that guides them when they are making for an island many days' sail ahead is above and beyond all this and can only be compared to the instinct that pilots the salmon to the river mouth or the flock of migrating geese to the same marsh year after year.

For two days, while the Tamata ran free before the wind, we swallowed nothing but water—a coconut-shell for each man in the morning, and another at night. During the calm we had been too thirsty to feel our hunger; now I learned the meaning of the word. Fahuri, squatting forward with pinched cheeks and over-bright eyes, scanned the horizon for signs of fish, or trailed a bonito hook vainly alongside, in the hope that some stray fish might be tempted to bite. At last I heard him shout feebly, pointing ahead with an arm that trembled excitedly. A moment later I saw what he had seen—a faint appearance of granulation on the line where sea met sky. Little by little, as we foamed along at ten knots, I made out what seemed to be a vast swarm of bees; the bees grew larger, became birds—thousands of them, circling and hovering over a square mile of sea. Fatu turned to me.

"Bonito," he said solemnly; "they are following the small fish toward the land, which cannot be far off. Let us pray God that they will seize the hook!"

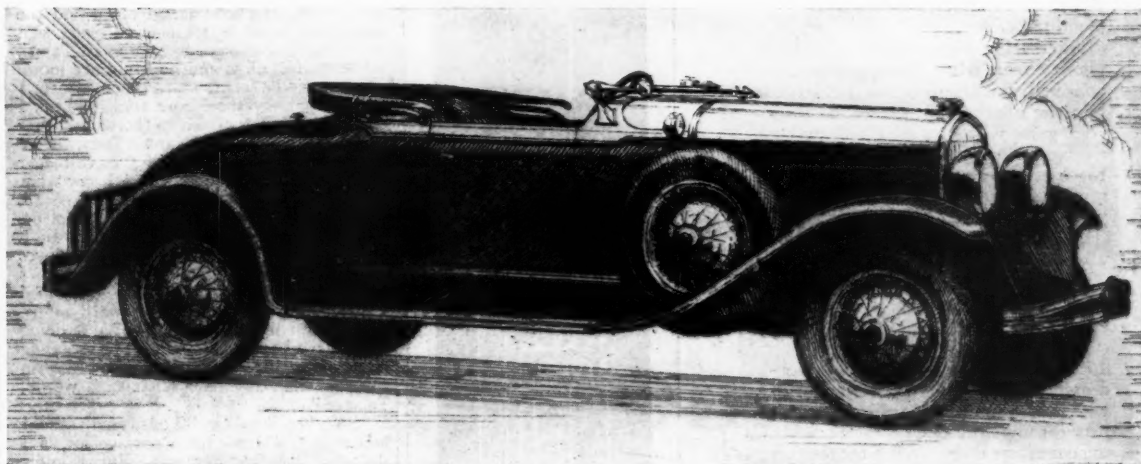
Five minutes later we were tacking back and forth in the midst of an enormous school of fish. The scene was so marvelously interesting that I almost forgot my hunger; here in this waste place of the ocean, hidden from all human eyes but ours, Nature displayed her inexhaustible fecundity. A thousand million little fish, hatched at sea, had banded together to obey the law of their being, which called them toward the fresh water where their lives were to be spent. Thousands of eager sea birds preyed on them from above, and a countless horde of bonito, swift, fierce, and with insatiable appetites, hung on their flanks and fed. But the little fish closed ranks as ton after ton of their numbers were gobbled up, and swam on to the west.

Old Fahuri, the most skilled fisherman of the Tamata's company, stood in the stern, trying the first of his lures. There was anguish in his voice as he called coaxingly to the bonito, as the older men still call: "Tu! Tu! Tu, el! Come on, old Crackle Skin! Come! Come! Come!" He shook his head bitterly as he swung the lure inboard and flipped another one out in the wake of the canoe. "They will not look at that shell!" he announced. Next moment the water bulged and swirled a foot behind the lure. Five pairs of eyes were on the bit of shell as it disappeared in a little cloud of spray. The line hissed forward vertically; the stout pole became a quivering arc. The expression on Fahuri's face would have made me laugh aloud at any other time, but I suppose my own features reflected the same ludicrous mixture of anguish and hope. "E Toheveri!" he exclaimed, which told me that he had hooked one of the full-grown bonito of forty or fifty pounds weight. He had the butt of the rod under his right knee now and was trying with the strength of both withered arms to get the fish's head up. I drew my breath—would our tortoise-shell stand such a strain? "Hold him! Hold him!" Fatu was shouting monotonously. Then the taut line touched the gunwale of the canoe. Marama's arm shot over the side and came swinging back with the fingers clenched in the gills of the big struggling fish.

[CONTINUED ON PAGE 398.]

CHRYSLER

PRESENTS

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New Chrysler "75" Roadster

WALTER P. CHRYSLER and his associates have held from the first that, constantly to extend its leadership, Chrysler must periodically create new modes which would proclaim themselves, almost upon sight, as overwhelmingly more attractive.

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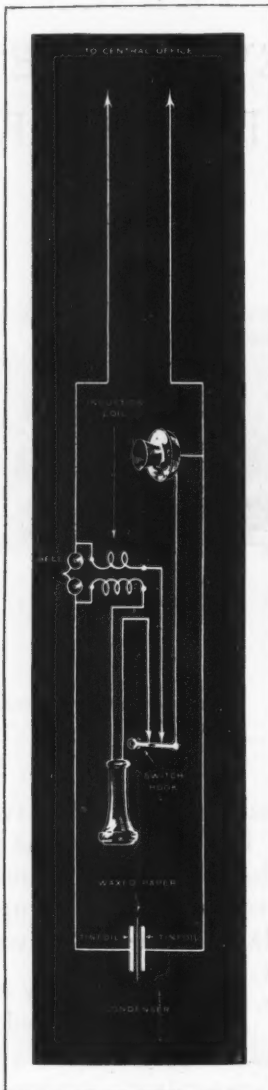
An Advertisement of the American Telephone and Telegraph Company

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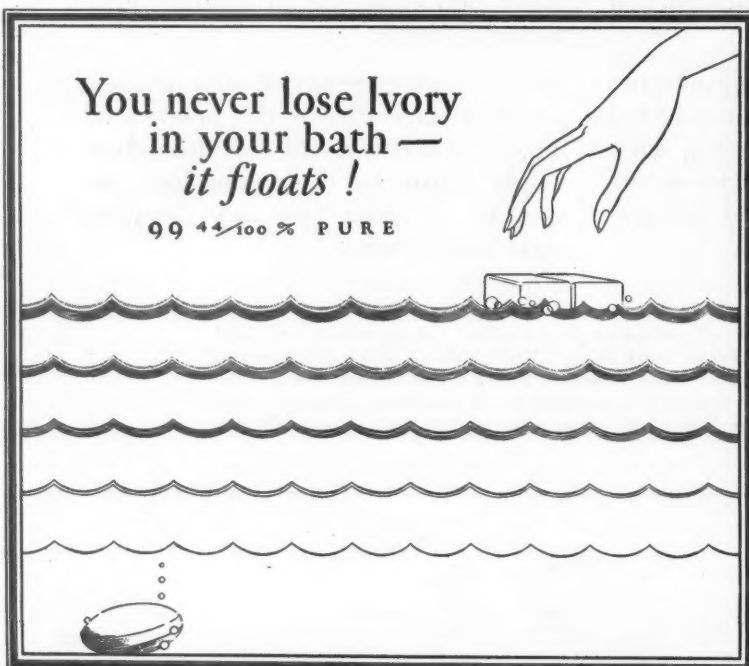
A condenser is a device made of two sheets of tinfoil with a sheet of wax paper between. It will let alternating current flow through it, but will stop direct current. Thus, thanks to the condenser, the operator can ring you at will, and yet direct current does not pass through the circuit except when someone is speaking. When the receiver is lifted, a connection is made (as in the diagram) that permits direct current to flow around the circuit *through the transmitter*, where it is modulated by your voice as you speak.

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THE DERELICT

[CONTINUED FROM PAGE 397]

THE steaks of raw bonito, red and nourishing as beef, put new life into us. When I had eaten as much as I dared after so long a fast, I took a sparing gulp of water and went aft to relieve Fatu at the helm. Lem could paddle a canoe, but to steer the racing Tamata, running before the southeast trade, would have been too much for his Chinese seamanship; so the three natives and I took turns at the steering-sweep.

One by one, the others lay down in the bilges to sleep. I stood aft of the rear outrigger pole, putting all my weight on the long heavy paddle each time a swell overtook the Tamata. With her sail bulging gloriously as she tilted on the crest of the sea, she swooped forward at dizzy speed, her sharp bows parting the water in roaring sheets of spray. The sea passed on; we jogged back into the trough, only to be lifted and sped once more. The food I had eaten and the strong fair wind, which showed every sign of lasting long enough to take us to Tahiti, made me feel alive and hopeful once more; in the middle of the afternoon, when I judged that my three-hour trick was up, I was still enjoying myself so thoroughly that I put off waking Marama. Then, as we roared along on the back of a wave bigger than any that had preceded it, I saw what made me stare and shout.

It was a trail of smoke to leeward of us, not many miles ahead. A steamer! In a moment all hands were rubbing their eyes and talking excitedly.

"She's heading this way!" exclaimed Fatu. "And she's dead to leeward of us. About eight miles off, I think. We're doing at least ten knots, and she must be steaming faster than that; we'll be abreast of her in less than half an hour! What shall we do, Tehare?"

"Stop her, if we can," I answered without hesitation; "I'd ask for a passage for us if she were heading our way. But I know they'll be glad to give us something to eat and enough water to fill our keg. And we can get our position from them; they might even lend us a spare compass when I explain the fix we're in."

Fatu smiled. "Tahiti is dead ahead," he insisted gently; "if the wind holds, we shall raise the land a day and a half from now. Never fear!"

I said nothing, but I was far from feeling the confidence the others felt. With a compass and a definite course to sail, I knew that I should sleep more soundly that night.

The combined speed of the two vessels must have been well over twenty miles an hour, and the steamer came rapidly into view, a pair of odd-looking masts, two raking funnels trailing threads of smoke which joined and sped off downwind, and a low gray hull very different from what I expected to see.

"E manual!" shouted Fahuri, using the native word, borrowed from English, for man-of-war. A moment later I saw that the old man was right; the ship approaching us was of the destroyer type, and she was loafing along eastward at about quarter speed, her long, lean hull slicing into the seas. Closer and closer she came—a British ship, for she flew the white ensign aft. My mind was working with desperate haste. Perhaps she was the Regulus, detailed, as I knew from my uncle, to patrol these seas. But how were we to signal her? I dashed forward, stripping off my tattered shirt, and shouted to Marama at the helm: "Hold her straight on to pass close to the north of them! And don't let her jibe!" In five seconds I was climbing the slender, swaying mast.

We were abreast of the man-of-war now, and not fifty yards away. I could see the crowd at her rail, staring at us curiously. Two men I took for officers had glasses up. With legs clasped about the mast and clinging to a stay with one hand, I waved my shirt furiously, trying to put into the gesture the message of distress I had no other means of communicating. We shot past her counter; I slid down the mast, yelling at the top of my voice: "Hard up!" Marama swayed on the steering-paddle with all his strength, the boom whizzed over our heads, and the Tamata spun about into the wind so handily that she made what yachtsmen call a "North River jibe"—luffing so fast, that is, that the sail, swinging to starboard, was cushioned by the wind.

As we close-hauled her on the port tack, welcome sounds were borne downwind—shouted orders and the shrill piping of a

whistle. "She's stopping!" cried Fatu eagerly.

"Yes," I added with even greater eagerness, for I had seen the word Regulus in gold-leaf on her stern; "and they're lowering a boat! Hooray!"

With powerful sweeps of the paddle, Marama kept the canoe hove to while the boat from the Regulus was lowered and pulled back to us. The sight of the bronzed sailors at their oars—clean and ruddy and smart—and the handsome young officer standing astern made me realize all at once the state I was in. In my excitement I had tossed my shirt into a mass of water and scales in the bilges, and now I stood clad only in an old straw hat and a ragged pair of dungarees, cut short and frayed. From the waist up the sun had tanned me to the color of an old and much-used saddle; my hair, uncut for months, streamed in the wind, and my only pair of shoes had been worn out so long ago that my feet were as horny as any Kanaka's.

Now the boat pitched and tossed alongside, and the young officer hailed us. "What's the matter?" he called above the hurly-burly of wind and sea. "Where are you bound? Do you speak English?"

"For Tahiti!" I shouted back. "Our schooner was sunk by a German raider! We're short of food and water." The words "German raider" produced the effect I had hoped for. The officer, only a little older than I, showed his interest in the news. He gave an order, and the boat moved closer still.

"Come aboard and have a yarn with the skipper," he called; "tell your men to stay hove to. How are we going to get alongside, with that outrigger and heathen gear of yours?"

I answered the question by springing into the sea, shouting to Fatu to stand off and on. A minute later I was hauling myself over the gunwale of the British boat. The sailors grinned at me; the young officer beckoned me aft. He smiled broadly as he took my dripping hand.

"I see you're a white man!" he remarked with twinkling eyes. "Jove! you chaps looked like a crowd of proper cannibals! So the Hun sank your schooner, eh?" he went on, as we were pulled back to the Regulus. "Give us the yarn!"

"Sorry," I answered, "but I can't—I gave the skipper my parole not to talk. All I can tell you is that they scuttled the Tara and marooned us on a coral island out to the east. But my men are free to give you all the information you want; the native captain speaks French."

"The Tara? Harry Selden's boat?"

"Yes—he's my uncle."

The officer regarded me with a new friendliness. "He is! We haven't a better friend in these parts. Old Brixton will be more than glad to see you!"

"By the way," I asked, impelled by a sudden curiosity, "you saw the course we were on—would we have passed anywhere near Tahiti?"

He reflected for a moment before he replied. "Let's see—how were you heading? By Jove! Yes. You'd have hit the island square in the middle."

THE boat was tossing close alongside the Regulus. As she rose high on the crest of a sea, my companion made a jump for a rope ladder hanging from the rail, and at the next chance I followed him. A burly, blue-eyed man, clean-shaven and in snowy tropical uniform, stepped forward to seize my hand.

"So you're Harry Selden's nephew," he said warmly. "I'm Commander Brixton, and it's a pleasure to have you on board." He clapped me on the back. "Been through the mill, eh? Come aft—how about some clothes and a bite to eat before we have a yarn?"

I grinned hungrily. "Thank you, sir," I replied; "both things sound pretty good."

I did some quick thinking as we walked aft, past smiling men in uniform. "Could I talk with you alone, for five minutes?" I asked. "After that I'll accept your invitation, for I've had nothing but raw fish for I don't know how long. No—none of us are really suffering."

Commander Brixton led me to his stateroom, closed the door and motioned me to a seat on a lounge.

"What is it, lad?" he inquired kindly. "Fire away!" I glanced out to make sure that no one loitered near the open door.

"My uncle told me, in confidence," I said

in a low voice, "to keep an eye open for something you were looking for—the Sumbawa."

Brixton sprang up at the word and faced me, ruddy face a shade less ruddy, and blue eyes gazing into mine.

"Have you sighted her?" he exclaimed.

"Yes, sir; and she's sunk in eight fathoms in Iriatai Lagoon."

"Jove! This is news!" His eyes sparkled with excitement. "Wait a bit!" he exclaimed, springing away to press a bell.

A man appeared and took his order for a tray of food. Presently the tray appeared, loaded with cold roast beef and sandwiches, and my host questioned me as I tucked this away.

"We were held up by the Seefalke," I explained between bites; "they scuttled the Tara, though the captain treated us very well. I gave him my word not to talk about what I saw till after the war, but I can tell you this: they were going to Iriatai to heave their vessel down and scrub her bottom, which was very foul, and we sighted the Sumbawa only a few miles offshore. The Germans were going to pass her, but I persuaded the skipper to tow her into the lagoon, on the chance that there might be something of value aboard. They were going to maroon us, you see, and they were too short of stores to leave us any food. When I suggested that there might be a lot of tinned stuff on the Sumbawa which would be a help to us, he was decent enough to tow her in."

"Something of value," repeated Brixton, half to himself. "Ha, ha! That's good! Well, go on—what happened then?"

"Then the hurricane came along and nearly finished us. Both ships parted their cables. I don't know what happened to the Seefalke—the derelict must have struck a shoal and ripped a hole in her bottom, for she's sunk more than halfway across the lagoon. The Germans who were camped ashore went away in two boats after the storm was over."

My companion nodded. "I know all about that," he said; "we picked them up before they had been a week at sea, and they're prisoners in New Zealand now. But go ahead—I'm ruining your meal. I'll do a bit of thinking for a moment or two. The Huns didn't tinker with the Sumbawa?" he asked suddenly.

"No, sir—they didn't have time before the storm."

"I'll tell you what we'll do, if you're willing. First we'll pick your men up and try to get that outlandish craft of yours on deck. I suppose her outrigger can be taken off. About eight fathoms, you say? We'll have to have a diving-machine—I'll go to Rarotonga, in the Cook Islands, for that—this is a British affair! Then we'll head back to Iriatai, get our job done, and go to Tahiti, where I'll put you and your men ashore. Do you mind? There are various reasons why I would like to have you on board till this job's over—sorry I'm not at liberty to explain. But bear one thing in mind: I'll have a report to make, and be sure that the credit's going where the credit's due! I can't say any more. How about it?" He held out his hand, smiling, and I took it warmly.

"For as long as you like, sir," I said. "I'm at liberty, now that the schooner's gone and Iriatai blown to bits by the hurricane."

[TO BE CONTINUED NEXT MONTH]

Beginning Next Month

THE UPHILL WAY

A great new serial of a boy's adventures during the early days of aviation

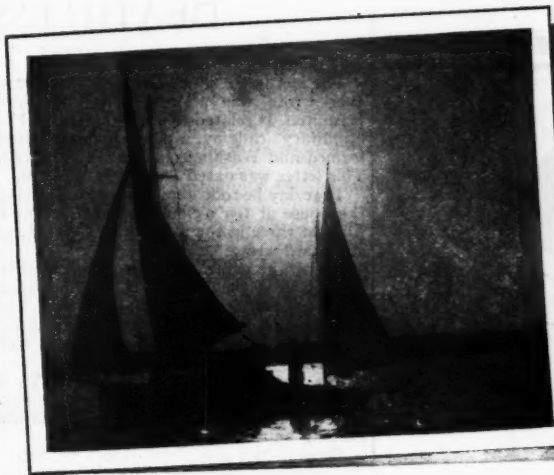
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Hey, fella—can you swim?

I couldn't, until after I got my first bicycle. That made it easy to get to the swimmin' hole two or three times a day and it wasn't long before I was as good as the rest of them. The bike I have now is better yet for this swimmin' business. It's got a new type multiple-disc New Departure Coaster Brake on it—same idea as the clutch on your dad's car. Twenty-four braking surfaces—and, oh boy, how she can hold when a fellow wants to stop quick—coasting is the best sport ever, now.

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Improved



DEATHLESS SPLENDOR

[CONTINUED FROM PAGE 389]

The last letter which George Washington ever wrote was addressed to Alexander Hamilton. It related to the establishment of a military academy, a plan which Hamilton formed and Washington heartily approved. This letter was dated December 12, 1799.

That day he rode about his farms, leaving the house at ten o'clock and not returning till past three in the afternoon. Tobias Lear afterward wrote:

"When he came in, his neck appeared to be wet, and the snow was hanging upon his hair. He came to dinner (which had been waiting for him) without changing his dress. In the evening he appeared as well as usual."

The next day, Friday, December 13, a heavy snow fell, and he did not ride out. He complained of a sore throat, and in the evening he was hoarse.

Between two and three o'clock on Saturday morning, he woke Mrs. Washington, but would not permit her to rise for fear she would take cold. He told her he was ill. In the morning, Doctor Craik was sent for. Following the current practice, Washington was bled and later in the day, on advice of other physicians, he was bled again. There has been hot discussion ever since as to whether George Washington died of a cold and its resulting inflammation or whether he was so weakened by loss of blood that he could not rally.

From his first realization that he was a sick man, Washington did not expect to recover. All day Saturday he grew weaker. He was considerate of everyone. He thanked the physicians for their care, and he expressed regret that he should have to tire his secretary.

His last hours were those of a good man. He had lived well, and he died bravely. As he grew weaker, he felt his own pulse, and in that act his countenance changed. His hand dropped from his wrist. "It is well," he said, and then was silent.

About ten o'clock, on Saturday night, December 14, 1799, George Washington died.

The Washingtons were short-lived people. His father died at forty-nine, his grandfather at thirty-seven, his great-grandfather at fifty-four. His mother came of sturdier stock, and lived to be eighty-two. She died of cancer, a disease to which Washington was predisposed, for he was operated on for that malady in 1794, and the operation was successful. Whatever tendency he had to disease, he conquered it.

The news of his death traveled as fast as news could travel at that time, and it brought a company of people to attend the funeral. These were told the simple story of his sickness and death, and how, even when struggling for breath, he thought of others.

The Capitol building in the new city of Washington was begun, and under the dome that was not yet built was a vault that was designed for the body of Washington. But he was not buried there. The family vault at Mount Vernon was prepared for him.

On Wednesday, December 18, the funeral was held. A vessel lying in the Potomac fired minute guns. A battery of guns brought over from Alexandria fired salutes. The procession was formed. The dignified service was read, and all that was mortal of Washington was buried in the vault at his own Mount Vernon.

Vessels that ascend or descend the noble stream that flows past his plantation to this day toll their bells as they pass the tomb of Washington.

CHAPTER TWENTY

The Influence of Washington

WHILE Washington lived he suffered the fate that has to be endured by all men in public life, but the criticisms that were so freely and unjustly employed while he was living were silenced after his death. Not only in the United States but in Great Britain and throughout Europe he was praised as a brave, wise man. Indeed, he was praised indiscriminately, and that fact brought its own reaction. He seemed at that time our one great man. Biographers hastened to tell the story of his life.

An Englishman, Thomas Jones, had written a sketch of Washington's life about 1785. The Rev. Jedidiah Morse, an American minister, at Charlestown, Mass., included

in his "American Geography" in 1789 a life-story of Washington that was reprinted in various forms after Washington's death. The year 1800 saw four short biographies. Morse's sketch was published in Baltimore with other material in a volume entitled "The Washingtoniana." But more famous than any of these was the little book by Parson Weems. It was dedicated to Mrs. Washington, and there is no reason to think that she objected to anything in it. Indeed, it is much underrated. While it has many and obvious faults, it is not only the best of the early biographies of our first President, but it was the best that appeared in many years.

David Ramsay, an American physician, published a life of Washington in 1807. In the same year appeared the fifth and last volume of a massive biography of him by Chief-Justice John Marshall. The first volume appeared in 1802, and was an introduction to the whole; that volume mentioned Washington only once. These two works, by Ramsay and Marshall, were painstaking, but they tried to make Washington almost superhuman. In 1830, Jared Sparks wrote what was at that time the very best life of Washington that had been published. It was scholarly and well written. Shortly after Sparks, S. G. Goodrich, whose pen name was Peter Parley, wrote a young people's life of Washington which had wide circulation. This had as a companion a biography in two small volumes issued in 1825 by the Rev. Aaron Bancroft of Worcester, Mass. The last five years of the life of Washington Irving were devoted to what he hoped would be his masterpiece, a life of Washington in five volumes. He put the last ounce of his energy into it, dying as he completed it in 1859; but his readers did not find it so great a book as he had hoped to make it.

This for a time stood as the high-water mark of Washington biography. The Civil War came on; new heroes arose; it seemed impossible for anyone to say anything after Irving. In 1889 Senator Henry Cabot Lodge wrote a two-volume biography for the "American Statesmen" series. It was followed by other biographies, by William Roscoe Thayer, Woodrow Wilson and others.

Portraits, busts and statues of Washington, by artists of varying ability, some of them eminent, were made while he was living and after he was dead. His face and figure became familiar throughout America and the world. It is a good face, intelligent, strong, benevolent; a worthy figure, tall, straight, dignified—a good figure and face for American youth to know and esteem highly.

Lincoln was born in poverty and spent nearly all his life a poor boy and man. Washington was born in comfort and became a man of great wealth. Lincoln overcame the handicap of his poverty. Washington overcame the greater peril of wealth. The boys and girls of the last two generations have mostly been poor, and have found encouragement in Lincoln's rise above the hampering conditions that came with poverty. Wealth has increased and is still increasing. We need the encouragement of an example like that of Washington—strong and unselfish and industrious in spite of wealth. Washington and Lincoln were both born in the South, and the South may well be proud of these two noble sons of hers. But both belong to the whole nation. They both believed in the whole nation, and each strove with all his might against great obstacles and strong opposition to glorify the ideal of one nation, which both wanted to be united and wholly free. In small and unimportant things they differed, but each of them believed in the United States of America, as Washington said, with

"1stly. An indissoluble union of all the states under one federal head.

"2ndly. A sacred regard for public justice.

"3rdly. The adoption of a proper peace establishment. And

"4thly. The prevalence of that pacific and friendly disposition among the people of the United States, which will induce them to forget their local prejudices and policies, to make those mutual concessions which are requisite to the general prosperity, and, in some instances, to sacrifice their individual advantages to the interest of the community.

"These are the pillars on which the glorious fabric of our independency and national character must be supported."

THE END

VIRGINIA'S BANDIT

[CONTINUED FROM PAGE 396]

pleasant coolness. He opened the door into the spare room. He walked in, his eyes accustomed to dim light. He gave a spring—here was something!

"Halt!" he roared. "Halt!"
Now Virginia opened her eyes wide. Foltz stood in the doorway between the kitchen and the hall.

"Wergie," he yelled—in moments of excitement his y's, like those of Mrs. Newhard, became w's. "Wergie, I'm to get the fifteen hundred!"

Virginia still sat with her head against the back of the chair.

"You are?" she said, trying to coordinate her desperate thoughts.

"I are!" Foltz spoke now with a sort of joyful solemnity. "Go to the phone, ring up the police and tell them I'm the winner."

Virginia laid back her head. "I shall do nothing of the kind."

"Do you think you'll get it?" shouted Foltz. "When he's been hiding all the time under your nose, and you never guessed it!" He shifted his gun into a threatening position. "Do what I say, Wergie!"

Foltz took a step toward her, another—surely he was not going to lay hands upon her! He was moving past her to the living-room. He stood at the telephone, the muzzle of his gun projecting into the kitchen, and as he spoke he drew away from the mouth-piece and peered round the corner.

"Central," he shouted. "What time is it by you?"

Central obligingly gave him the time.

"Remember that's the hour when Foltz called you! Now give me the police." He heard a click, another click; receivers were being lifted from their hooks. It was well he had established the hour with the exchange! "Police? This is Foltz at McIntyre's farm. You get that? Well, you tell the world that I have the fifteen hundred.—Yes, I have him fast. You get out here quick.—What?—Half dead and half alive."

He hung up the receiver and entered the kitchen. Virginia sat in her chair with her hands clasped in her lap. Foltz looked at her curiously. "Are you sick?" he asked. "You looked sick for a couple o' days."

Virginia did not answer.

There was suddenly a loud confusion, the whirr of motorcycles, the sound of voices, of running feet. Into the kitchen stepped an officer, behind him another, then another. Foltz moved from the spare-room door across to the kitchen door.

"Remember, I get the reward," said he. "I have plenty witnesses."

"Get out of the way," ordered one of the officers.

"I called the exchange and told her," said Foltz, intending to hold his ground until his point was proved. "She knows what time it was."

"This is a desperate criminal!" cried the captain of the squad, a tall and powerful man. "While you're having afternoon tea, he'll get away!"

The captain seemed to step over Foltz. He carried a revolver in his hand; the men who followed him pulled revolvers from their holsters.

"Where is he?" asked one.

"Hands up!" ordered the captain.

"Where is he?" he asked Foltz angrily.

"Behind the bed."

The captain entered the dim room. He had noted an electric fixture in the kitchen; feeling for a button on the spare-room wall, he turned on the light.

"There he lays!" cried Foltz, getting his gun into position.

"Put that down!" ordered the captain's sharp voice. "We'll look after him." The voice changed. "What! Dead, is he?"

The captain knelt on the floor beside the folded quilts. "Get the shutters open, will you? Here's where the chief got him. A bad slanting wound—looks infected. How in the world did he get 'way out here?"

Virginia stood with her hand on the jamb of the kitchen door. She could hear brakes put suddenly on cars, other voices, many voices.

"Where were the people all the time he was hiding here?" asked an officer.

"McIntyre, he went to Pittsburgh for sheep, and Missis, she's away," explained Foltz. "There wasn't anybody here but a sort of simple-minded girl. I guess her cousin was here, but only at night. He could easily get in. They don't never sleep in this room."

"Have you a truck we can use?" asked the captain.

VIRGINIA walked across the hall. Her patient lay in plain sight. His sunk eyes were closed, his face was marble, his black beard had grown to be an inch long. One by one the officers looked round at her.

"Don't you be afraid, Miss McIntyre," said the captain kindly. "We'll get him out of this in fifteen minutes."

"You mean you'll take him away in a truck?"

"Sure! We'll put some straw in it."

"You ought to call a doctor," wailed Virginia. "He'll die!"

"Now, young lady—" The captain came to her side. "You go upstairs till this is over. People who rob and shoot can't expect to lie in soft beds."

Virginia saw someone on the porch. The sight was bewildering—how had Mrs. Newhard got herself here so quickly? Of course she had heard Foltz over the telephone! There was Mrs. Newhard's son—he had doubtless been happy to bring her. She saw scores of others—neighbors, from near and far.

"Clear this whole crowd away," ordered the captain roughly. "Get 'em out. You"—he looked at Foltz—"hitch up your truck. You"—he spoke to Virginia with only a little less sharpness—"you go upstairs, Miss McIntyre, and stay there till we're gone. Is there anyone from out here you'd like to have with you?"

Mrs. Foltz succeeded in getting her foot over the sill. "I'm the one," she called.

"I'm here, Wergie!" screamed Mrs. Newhard.

The officer closed the door.

"You can't take that poor man away in a truck," wept Virginia.

"We're going to take him away in a truck, at once."

"Let the doctor see him first!"

"Young lady, we know our business."

Moved by some strong pressure from

[CONTINUED ON PAGE 402]



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Trapper Evans

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without, the door opened. The officer on guard seized the entering person by the arm.

"It would be murder!" cried Virginia hysterically.

"What would be murder?" asked an outraged voice. "Take your hands off me! This is my house. What in the name of sense is the matter?"

Satchel in hand, Mrs. McIntyre stood inside the door. The guard closed it behind her. She looked round her kitchen; she looked at Virginia; she looked at the constabulary; she looked at Foltz. She set down her satchel.

"In the name of sense!" she said again. "I say once more, what is the matter?"

"I caught a safe-cracker," announced Foltz.

"You caught a safe-cracker!" There was astonishment in Mrs. McIntyre's voice; there was also amusement. Vaguely the tragic situation was brightened.

"If you don't believe me, he's laying in there," said Foltz, angrily.

Mrs. McIntyre's bewildered eyes sought the captain's.

"The Gettysburg post office was robbed," he explained. "One of the burglars was shot and himself shot the chief. He made his way out here and has been hiding in your house."

"Where was John McIntyre?" demanded Mrs. McIntyre.

"He went for his sheep," said Foltz.

"He went for sheep?" repeated Mrs. McIntyre. "That's a great note! Where's Virginia?"

Officers and civilians looked round. Like a house of cards collapsing under a mighty breath, Virginia sank upon a chair. She clasped her hands like a child. She was again a child in this strong and stern presence. But in the wisdom of this stern presence she had unlimited confidence.

"Mother!" said she hoarsely. "Go look into the spare room."

Mrs. McIntyre walked across the room into the hall, into the spare room. "In the name of sense!" said she still again. "Have you had a doctor?"

"No, madam!" The captain spoke angrily. "We'll have the doctor as soon as we get to Gettysburg."

"To Gettysburg!" repeated Mrs. McIntyre. "Nonsense! Put him on that bed and call Doctor Oliver; no, call Doctor Oliver before you lift him to the bed. Don't dispute with me! I'm old enough to be your mother. If you move him, his blood will be on your head!"

As if frightened by this biblical threat the captain ordered one of his subordinates to call the doctor. "Then clear every living soul out of here, out of the house, out of the yard. Mrs. McIntyre, get your daughter upstairs."

"You needn't tell me that," said Mrs. McIntyre. She walked into the kitchen. The only civilian remaining was Foltz.

"She fainted," he announced.

Mrs. McIntyre reached Virginia's side in a leap. "She hasn't fainted," she said. "She's asleep. In the name of sense—" She looked round at the strangers and at Foltz. "You don't suppose this poor child could have been here alone, do you?"

CHAPTER SEVEN

"Say It, Mother!"

A LONG freight train was slowing up at Fairfield Station. It was five o'clock in the afternoon, and the sun was still high. A shower at noon had cooled the air without doing any harm to growing crops. Near by were pleasant hills, upon whose dark green the human eye rested with pleasure, and to east and south and north lay a fertile plain. The station was a mile from the town, and beside the ticket office and freight house stood a bus, a small truck and several cars. Tied to a near-by fence were two tall sorrel horses, which nuzzled each other comfortably.

In the center of a small group of men stood Henry Foltz. He was talking very fast and gesticulating freely. Sometimes he pointed to his shoulder, sometimes he seemed to be holding a gun. About him was an appearance of triumph, even a sort of exaltation.

The train came to a halt; the engineer put his head out of the cab window; three men in heavy overall suits swung themselves down from various sections of the train; from the caboose stepped John McIntyre. He showed the effect of a night of partial wakefulness and a journey through a good deal of dust and smoke. At sight of him the group of men

VIRGINIA'S BANDIT

[CONTINUED FROM PAGE 401]

separated as if unwillingly, and Foltz came toward him.

"Hello, Foltz!" Mr. McIntyre saw the tethered horses. "Where's Kincaid?"

"Didn't come," answered Foltz. "Never thought he was reliable."

"Didn't he send any word?"

"No."

"That's queer!"

"Oh, I don't know!"

Foltz looked annoyed. But his friends were approaching; probably they would spoil his story by interruptions. He had a sense of the dramatic, and he had looked forward eagerly to telling Mr. McIntyre of the events of his absence. He looked angrily over his shoulder. He was nervous—to be on the verge of receiving a cheque for fifteen hundred dollars is a nerve-racking position. The very ease with which it had been won was disturbing.

"Have you told him?" asked the nearest of the approaching group.

"Not yet," said Foltz.

"He told me Kincaid hasn't come, and that's enough to hear at one time," said Mr. McIntyre, sharply. "I want this stock out as soon as possible. We've got a good distance to go, and sheep don't walk any too fast. You can get 'em right out and into the road."

The first sheep poked out their noses, then trotted into the road; those behind pressed them. They tried to go toward the west, but the horses standing nose to nose barred their way.

Mr. McIntyre patted both fine heads. "Good work!" said he.

In a moment Foltz was alongside and awkwardly mounted on Lady, who moved restlessly under his pressing knees.

"Well, now!" said Mr. McIntyre. "What has happened?"

"A great deal." Though Foltz had a sense of the dramatic, his technique was not cultivated, and he did not know how to begin. "In the first place the Gettysburg post office was entered the night after you left."

"Did they get anything?"

"Nothing."

"Good!" Mr. McIntyre spoke with a cheerfulness which was exasperating to a naturally pessimistic soul.

"But one of the fellows shot at the chief of police."

"Hurt him badly?"

"No," confessed Foltz, unwillingly. "And the chief of police shot at him and hit him."

"Kill him?"

"No."

"That's good too." Mr. McIntyre seemed to Foltz silly in his cheerfulness. "Perhaps he'll repent. A good wound is like a good licking; it sometimes brings a man to himself."

"Well, he ain't brought to himself, not he!" said Foltz. "He got away, and he took to the woods, and he came to the west, and"—Foltz could motivate no more—"he hid in your house—that's what he did!"

"Who found him?"

"I found him. I'm getting fifteen hundred dollars' reward for finding him—that's what I'm getting!"

"You are!" Mr. McIntyre showed gratifying surprise, even amazement. "Where was Miss Virginia?"

Foltz gave no titles. "Wergie was right there. She never dreamed anything was going on, no more than the babe unborn. He could 'a' carried her off."

"Where was Miss Nell?"

"She wasn't there, anyhow not all the time. Her sister's children is with her—sick." Mr. McIntyre quickened the speed of Luce, but had to slacken it again for fear of pressing the sheep.

"Quiet! Steady!" he said as much to himself as to his horse. "You sent for Mrs. McIntyre?"

"She came," said Foltz. "She's there, and she's got the burglar there. She defied the police something fierce."

"She's got the burglar there!" Mr. McIntyre's voice had a sort of groaning sound—it seemed to him they had been riding for hours.

"She's got the burglar there," insisted Foltz. "She wouldn't let them take him to jail, where he belongs. She's got him in the spare room; he's very sick. He made himself a bed on the floor; he fetched quilts from the attic; and he was round the barn and stole the liniment and poured it on himself. The whole bottle's empty. That saved his life, the

doctor says. That, and he cut the bullet out of himself."

"What sort of looking man is he?"

"Fierce. Wild. You could believe he would rob and murder everything he saw."

VIRGINIA MCINTYRE lay in bed—not her own bed over the spare room, but her mother's at the opposite corner of the house. She had been in bed for about twenty-four hours. She had heard vague sounds—men's voices raised sharply, then lowered hurriedly, the crowing of roosters, the lowing of cattle, the blast of automobile horns. Doctor Oliver had stood by her bed with her mother, and she had heard a few sentences.

"She's all right," said he.

"Will that man live?"

"I'm afraid so."

It was comforting to know that someone was going to live, queerly as the doctor seemed to feel about it.

Virginia tried to make out for a long time the identity of a person sitting by the window.

"Who is that?" she asked at last.

A stout figure rose—not a stout elderly figure, but a stout active young figure.

"Nell?"

"Yes, you rascal," said Nell. "Want anything?"

"A drink."

It was six o'clock now, and Virginia was wide-awake and fully aware of all that had happened. The deep voices of men were to be heard below stairs—then the poor fugitive was still in the house! There were odors—odors of cooking, vague, not unpleasant; odors she could not identify, medical, antiseptic, with suggestions of healing, and far more delicate than that of the liniment.

She sat up. She felt weak, but she was sure that she could rise and dress, and bed was no place for one who could be about. She put her feet to the floor and stood up; she was able to stand! She looked around for her clothing and crossed the room and opened the cupboard door. She put on her stockings, her shoes, and again tried standing. She was a little shaky, but by taking hold of the furniture she could walk. She opened the slats of the shutters; she could see on the rim of the hill a cloud of dust. She clasped her hands. The cloud approached; from it came familiar sounds. A brown mass filled the road, moved forward. It was dotted with short horizontal lines of black, six hundred flapping ears. She saw two tall objects behind the sheep—her father and Foltz on Luce and Lady.

"He's here!" she said. "He's here!" She sat down on a chair to wait. "If I go down before he comes, she'll drive me back," she said with a smile.

Foltz's boy walked up the road. He waved his arms, and the brown mass turned into a field and divided into three hundred portions. The riders came on; their outlines, now that they were out of the dust, became plain. They rode into the barnyard, and Mr. McIntyre sprang down and strode toward the house. Virginia went slowly down the stairs.

Three men entered the kitchen as she stepped out of the hall into the living-room. One of them she recognized as the sheriff. Mrs. McIntyre was speaking.

"I was at my sister's," she explained.

"Over at McConnellsburg."

"Was your daughter alone in the house?" asked the sheriff.

There was a sob in Mrs. McIntyre's voice. "It was the most unfortunate thing. I had to go to my sick sister; there was no one else. After I'd started Mr. McIntyre got a telegram that he must come for his sheep. Virginia called her cousin, but her cousin's nieces and nephews were with her, and all had whooping-cough. The Foltzes were near at hand, and I suppose she thought she acted for the best. She's young; she hasn't had any experience."

Virginia pressed her hand to her lips to quell an hysterical impulse; nevertheless she uttered a queer chuckle. Several persons turned their heads nervously, but no one stepped back to look into the living-room.

"When did you say the post office was robbed?" This was the voice of Mr. McIntyre.

"On Sunday night."

"And when did this man come here?"

"That's the dreadful thing," answered Mrs. McIntyre. "Nobody knows. This poor child alone, with a murderer in the next room!"

[CONTINUED ON PAGE 404]

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THIS BUSY WORLD

A Monthly Summary of Current Events

THE CAMPAIGN

WITH the nomination of Mr. Hoover by the Republicans and Governor Smith by the Democrats, the Presidential campaign at once took on liveliness and interest. For the first time the Republicans went west of the Mississippi for their entire ticket, Senator Curtis of Kansas being the nominee for Vice-President. In Governor Smith we have the first candidate of a major political party who is a Roman Catholic, though two chief justices of the Supreme Court, Taney and White, have been of that religion. Mr. Hoover, on the other hand, is the first Quaker to win a Presidential nomination. It is already evident that the election will show some shifting of party lines. Governor Smith will get some votes that are ordinarily Republican and lose some that are ordinarily Democratic; his well-known views on prohibition as a Federal policy will help him in some quarters and injure him in others. It does not appear likely that Mr. Hoover will lose a great deal of party support in the Western farming states, on account of the opposition of the present administration to the McNary-Haugen bill, but he may lose some.



Herbert Hoover

It seems probable at this time that the Eastern industrial states and the border states of the South will determine the result.

A WOMAN FLIES THE ATLANTIC

THE first woman flyer has crossed the Atlantic—Miss Amelia Earhart, a social worker and amateur aviator of Boston, who accompanied two men, Stultz, the pilot, and Gordon, the mechanic, from Trepassey in Newfoundland to Burry Port in Wales, where they landed, June 18, after a trip made in fog and cloud. The party was received with great enthusiasm in England.



Miss Amelia Earhart

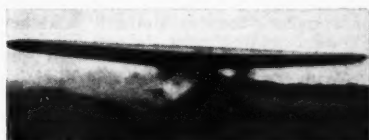
THE PRESIDENT'S SUMMER ADDRESS

PRESIDENT COOLIDGE is spending the summer among the Brule waters in northern Wisconsin—a spot quite as remote from ordinary tides of travel as his South Dakota summer home of last year. He left Washington without having signed the bill for government operation of the electric-power plant at Muscle Shoals, and it is generally held that his "pocket veto" of that measure



The summer White House: a photograph of the President's home at Brule, taken from the air

will prevent it from becoming a law. He did actually veto several important bills, including the McNary-Haugen farm-relief bill, and, though some of them were passed over his veto, the McNary bill was not. Congress in the confusion of the closing session failed to get the navy-construction bill to a vote, so no new cruisers are authorized—a lame conclusion to a building program which, as originally proposed by the Navy Department, would have cost more than \$500,000,000.



Times-Wide World

The Southern Cross starting on its extraordinary flight from California to Australia

FLYING ACROSS THE PACIFIC

AT the risk of giving air news more than its proportional share of space, we must refer to the remarkable voyage of the Australian flyers Kingsford-Smith and Ulm and the American navigator Lyon, from the Oakland airport in California to Brisbane, Australia. The flight was made in three "hops," one from Oakland to Honolulu, the final one to Brisbane. The daring airmen had some unfavorable weather to contend with, but they came through "on time" at each trip.

FRANCE STABILIZES THE FRANC

FRANCE, the last of the great nations to return to a gold basis, has at last "stabilized" the franc by law—on a valuation of a little less than four cents. That is just about one fifth of what the franc was worth in 1913, and it represents of course an enormous depreciation of security values since the war. However, the real crisis was passed several years ago, for the franc has not been above its present legal value for at least eight years. It is due to the determination and ability of M. Poincaré, the premier, that stabilization was made possible without a complete collapse of the old currency, such as occurred in Germany in 1923.

THE CHINESE REVOLUTION

ANOTHER step, and a very important one, has been taken by the Chinese revolutionists. Their armies, led by Chiang Kai-shek, Feng Yu-hsiang and Yen Hsi-shan, began to close in on Peking in May, and met with astonishingly little resistance from the Northern troops under Chang Tso-lin, the veteran dictator of Manchuria. The only real fighting was with Japanese troops, who were surrounding Tsing-tao, a seaport of Shantung, where Japan has very large commercial interests. For a time the situation there was tense, but the Japanese made no effort to keep the Nationalists from pushing on to Peking. Chang Tso-lin hurriedly withdrew and seems to have been killed later by a bomb explosion at Mukden in Manchuria. The Nationalists will probably decide to remove the capital of China to Nanking. It remains to be seen whether the various revolutionary leaders can work in harmony, and whether the Nationalists can organize an efficient government.



General Fukuda, in charge of Japanese troops in China

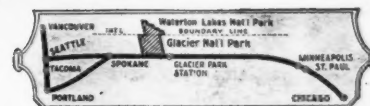
A NEW COLLEGE DEGREE

BY way of recognizing the remarkable work of Col. Charles A. Lindbergh in aviation, New York University has conferred on him an honorary degree hitherto unknown, that of Doctor of Aeronautics. What would the medieval scholars who first inaugurated the practice of giving scholastic degrees think of this one! But, now that it has been established, we may hear of other universities granting it.



Charles A. Lindbergh, D.A.

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"Next to Myself I Like
'B. V. D.' Best!"

"Not quite a murderer," corrected Mr. McIntyre.
"A robber then!"
"Where is he?" asked Mr. McIntyre.

"Over there!"
Mr. McIntyre stepped across the room and into the hall. He came back in an instant. "That's no murderer or robber!" he said, sharply.

Foltz strode forward into the center of the room.

"If ever there was a murderer or robber, that is one!" he yelled. "You would pick him out in a crowd as a murderer and robber and worse."

VIRGINIA stepped into the kitchen. She was no longer inexperienced, but she was still shy. Now she forgot all her shyness.

"He didn't act like a robber or a murderer," she declared. "He was very gentle." With one accord all turned their heads.

"Virginia, go back to bed!" commanded Mrs. McIntyre.

Mr. McIntyre crossed the room. "Sit down, my dear," said he. He looked at Virginia with half-closed, intent eyes. On her face was an expression of exhaustion and shock too deep to have been produced by the mere discovery of the fugitive. "When did this man come here?"

"On Monday evening."

"What!" cried Mrs. McIntyre.

"Had you heard about the robbery?" went on Mr. McIntyre. "Now, Mother, let me talk to her."

"Yes."

"Did you think he was the robber?"

"I did. He came to the kitchen door and fell in flat on his face. He was helpless. I pitied him." Virginia's voice grew defiant. "You would have pitied him. There was a poor dog here with a crushed foot. I tried to help them both."

"Did he talk intelligibly at any time?"

"No."

"Did he give his name?"

"Sometimes he said his name was Donald Barrie, sometimes he said it was McIntyre."

"The doctor tells me he cut the bullet out himself," said the sheriff.

about his most foolhardy stunt, but I can't resist it. A few years ago he bought an old "pusher" airplane—the kind of ship, current in 1910, that carried its one propeller in the rear. Art thought he was being very foresighted in replacing the old-fashioned engine of the plane with a 90-horsepower Curtis motor. Naturally, with all this power, "the old death crate" soared into the air like a booted football. And then the inevitable happened. The engine, far too powerful for the flimsy old plane, tore loose a wing with its vibration. Strapped out in front like the nose on a rocket, Art came down in a beautiful curve, the wreckage piling all over him. In the hospital he had plenty of time to come to the sober realization that a modern plane is none too good.

You will gather from the foregoing that Art is absolutely fearless. He had to be. It has been his job to do things that no other dare-devil would tackle. In the box on page 385 you will find printed a list of stunts, most of which Art has performed—and the prices which he says the casting offices pay to men who perform these hair-raising feats. Would you do it for this? The most sensible answer is that you would not do any of them at any price. Today Major Arthur Goebel has given up stunt flying. Like Colonel Lindbergh, he has earned his flying spurs, and he, no less than Lindbergh, realizes that continued stunting will eventually end in a bad accident. They're both playing safe now by flying safe and knowing well enough that in commercial aviation there will be glory enough in the future.

Why Is a Stunt Man?

Why does every stunt man try constantly to outdo everyone of his fellows in bravery, in daring—and in foolishness? Just what is the game?

The motives are only two. Ambition in the form of desire for popular applause, and avarice which looks for money. Whether the stunt man be an "aërobat" or a dare-devil of any other kind, he and all his sort are chiefly out for the money. They are out for large amounts of cash quickly if not easily earned. They are willing to gamble their lives against a few hundred dollars.

A stunt man differs from us ordinary folk

VIRGINIA'S BANDIT

[CONTINUED FROM PAGE 402]

"He didn't," said Virginia quickly. "I cut it out."

There was a heavy thud as of a falling body. Virginia gave a little scream. But no one had fallen; it was only Mrs. McIntyre dropping into a chair. Her husband looked at her anxiously, but his anxious look changed to a smile. "Steady, Mother!" said he. "You cut out that bullet, did you, Virginia? With what?"

"With the butcher knife," said Virginia, steadily. "Like you cut the bullet from under the skin of the sheep. It was easy; it sort of jumped out."

The sheriff looked at the constabulary officers; they looked intently back.

"Where is the bullet?" asked a voice.

Virginia frowned. "I think it flew under the bed."

An officer stepped across the hall. The room was very quiet except for a remark of the sheriff. He meant to whisper, but he was a large and powerful man, and it was difficult to whisper. "That would settle it," said he.

Mrs. McIntyre sat wiping away tears, men shifted uneasily from one foot to the other. Foltz stepped toward the door so that he could look into the spare room.

"Why, that isn't the man!" he cried.

"Yes, it is," said an officer. "Only he's cleaned up."

An officer crept out from under the high bed, a small object in his hand. He walked directly toward Mr. McIntyre and displayed it in his palm.

"That never came from the chief's gun!" he declared.

Mr. McIntyre bent his head over the outspread palm. He took the bullet into his hand.

"Foltz!" said he sharply.

Foltz moved uneasily toward the outer door, but a uniformed figure interposed.

"Foltz!" said Mr. McIntyre again. "Have you been shooting?"

Foltz looked wildly about. Had he been shooting? He tried to think. Did anybody see him?

"He was shooting on Sunday," said Virginia. "He had his gun, and he wanted to

shoot my poor dog, and I wouldn't let him. Later I heard a shot."

"Did you shoot at anything?"

"I shot into the bushes at a dog."

"Did you kill him?"

"I hit him."

"At your old tricks!" said Mr. McIntyre. "If it's the bank robber, what matter who shot him?" demanded Foltz shrilly. "It was by my luck that I shot him. Let me go!"

The hand would not be shaken off.

"Hush!" said Mrs. McIntyre. "The doors are open."

Virginia looked across the hall. Low on the pillows lay a sleeping figure.

"That isn't the man," she said. "He was middle-aged. That's a boy!"

"Same chap, miss," said an officer. "He's been shaved and cleaned up."

Now it was Virginia's turn to stand open-mouthed. She did not blush; Virginia dreamed no foolish, unfounded romances.

"Where are my letters?" asked Mr. McIntyre.

"On your desk."

Mr. McIntyre took a long step into the living-room, another to his desk. He returned with a hastily torn envelope in his hand. He looked from one to the other of the large company as though he were stricken dumb.

"What is it?" demanded Mrs. McIntyre as one who can endure no more.

"This is James Kincaid's nephew, Donald Barrie, come to tend my sheep!" gasped Mr. McIntyre. "He walked in from Greene County."

"Then where's the bank robber?" shouted Foltz.

"Not here," said the sheriff.

"Do I lose my fifteen hundred?" cried Foltz still more wildly.

"You do," said the sheriff. "You may lose more than that. You come to town and tell the Squire just when you shot and where."

Mrs. McIntyre looked around the room. Her eyes fell last of all upon her daughter. Virginia caught her eye. She grinned like a boy.

"Say it, Mother!"

"In the name of sense!" said Mrs. McIntyre. "And I thought you'd have a pleasant, quiet time!"

THE END

STUNT PROFESSORS

[CONTINUED FROM PAGE 385]



Tom Mix and a dummy leap from a patio on Tony's back. The dummy is used, since the weight would otherwise break the horse's back.

largely in that he has mastered fear. With sufficient confidence, anyone can be a stunt man. But one must bring reason to bear upon instinct. You can easily walk fifty feet or more on a plank only one foot wide if that plank lies on the ground. But lift it one hundred feet in the air and you will immediately doubt your ability to do this very same thing because of the age-old fear of falling.

But the ordinary stunt man is passing. Cinema tricks are rapidly writing his epitaph, which is as it should be. The magic of the camera is rendering it unnecessary to subject any man to the long chances of dare-deviling. That is why I have written their brief saga now and sung a little of the song of their astonishing deeds and mad courage.

To my mind the greatest stunt men in the world are the high-salaried stars like Tom Mix and Douglas Fairbanks. They do not find it necessary to take wild gambles with death to win their audiences. They can hire the best dare-devils available, but they do

not choose to, because they believe in giving everything in them to their public. They succeed because they have true skill and great strength. The combination does the work.

Once upon a time a group of men stood in front of a building in Denver, Colo., watching several boys playing ball in the street. One young lad gave the ball a swat that knocked it high into the air, and as the ball came down it lodged in a crevice of the building's ledge, too high to be reached from the street. One by one the boys tried to scale the building, and it was astonishing to discover the poor physical condition of most of the boys.

Finally the turn came to a dark-complexioned little fellow, stockily built, all bone and muscle. With the agility of a cat, he sprang up and caught the arm of an awning and then turned a flip-flop that landed him on the ledge above the doorway. He quickly recovered the ball and came down as easily as he had gone up. "What's your name, young fellow?" asked an elderly man as he handed him a silver dollar.

"Fairbanks," came the reply.

The Greatest Stunter of Them All

The elderly man learned that stunts were the boy's chief hobby. As time went on and as Douglas became more proficient, the stunts became more complex. And with them Fairbanks developed a philosophy.

"Mix your exercise with fun," became his creed. "Only in this way can you get the best exercise out of it." He says that you can get exercise out of everything you do, if you do it in the right way. If you walk into the library to get a book, you can make it a form of exercise provided you carry yourself correctly and put some spring into your gait, instead of dragging your feet along.

If there is a moral for young people attached to this saga of the stunt man, I should say that it was: "Build your early years around the philosophy of Doug Fairbanks and make it a stunt to do everything as well and as enthusiastically as you can. Don't spend too much time admiring the movie dare-devil, and don't spend any time trying to follow his example. There are better ways of coming to fame and fortune."

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READY, ALL—STROKE!

[CONTINUED FROM PAGE 375]

strapped into wooden foot-blocks. You have one oar to handle,—not two, as in sculling a rowboat,—and you hold it with both hands. It is a lever about twelve feet long, fitted into an oarlock on a steel outrigger which projects from the side of the boat; this, naturally, increases the leverage.

When everything is ready, the shell is carefully pushed out from the float, or wharf. A tiny collision would break its delicate fabric; and it would instantly tip over if it were not for the eight oars lying with their blades flat on the water, four on each side. The oarsman in the bow, or No. 1 seat, is called "bow." Then follow No. 2, No. 3, and so on to No. 8, who is, however, always called "stroke" because he sets the stroke for the whole eight.

The coxswain, who steers the shell with long tiller lines attached to a rudder, now gives the command "Ready, all—stroke!" At the first word you bend your knees, and the pressure of the foot-straps against your insteps draws the sliding seat toward the stern of the shell, while you stretch forward as far as you can reach with the handle of your oar.

At the word "stroke" you drop your oar blade to "catch" the water, you pull with your arms, you push back with your legs against the foot-blocks, and you finally end the stroke with the legs straight, and the hands drawn in against your body, which is leaning backward. The sliding seat has now reached the extreme forward end of its run along the track.

That is the stroke—but it is only half of rowing, and most beginners will consider it the easiest half. For you now have to make the recovery which will put you in position for the next stroke. You cannot simply sit up and slam yourself into the first position, with the knees bent and the arms stretched out for the "catch." A rough, careless recovery is what checks the boat between strokes. You have to learn to recover with such perfect balance—fully equal to that of an acrobat—that the boat loses none of the momentum that causes it to ride smoothly.

Yet there is no rest during the recovery. The average rate of strokes in a race is thirty or thirty-two to the minute—so you have to perform the full stroke and recovery within two seconds. Then the first stroke will be raised to thirty-eight or forty just before the finish, and at other times, too, when the stroke oar or the coxswain demands a spurt.

Long, faithful practice is needed before you can master all the details—the balance of the body, the complicated wrist motion that snaps the oars cleanly into the water and out again, the hard drive with the legs. It is possible to make at least fifty different errors during each racing stroke; little errors, but they are just as fatal to smoothness and speed in rowing as a jerky swing is fatal to accuracy in tennis or golf. If one of the eight oars wobbles slightly, the whole shell will be put off balance. If one oarsman is the least bit late in catching the water, he will put the whole crew out of gear. Suppose the loss of speed amounts to only a second every two hundred and twenty yards. Then it will amount to thirty-two seconds in a four-mile race, and you can figure out for yourself what that means in distance with a shell rushing along at six yards to a second.

A Human Mechanism

Now you see why a crew coach needs intelligent, teachable men. There is no chance for all the oarsmen to talk to one another during the race, as do ball-players in a game. The coach can't send in a substitute with instructions, once the signal is given for the start. The crew rows its own race. The eight men concentrate on their work, each keeping his eyes strictly on the back of the man in front of him—in no other way can he regulate the speed of his stroke and recovery, as

the stroke goes up and down in number of beats to the minute. A racing crew is the most beautiful piece of mechanism in the world—human mechanism, with eight brains working absolutely together to coordinate the work of eight bodies.

The human machine has limits, of course. It can't be driven past the breaking point. Every man wants to give his utmost, yet he must learn to gauge his strength and conserve it until—just at the winning line—he has given every ounce he has. That is why you see men who have rowed strongly right up to the line almost collapse for a few seconds once the race is over and won. But they quickly sit up again, no worse for the experience. The human body is made to be used, and used to the full. The kind of man that Roosevelt called a "mollycoddle" tries to keep away from hard sport, and no mollycoddle has ever gotten anywhere either in sport or in life.

What does rowing do to a man physically? Does it injure him? The answer is a certain and absolute "no." If he lives properly and obeys orders, it does just the opposite. It develops all his muscles, and develops them uniformly. Many a skinny, round-shouldered boy has been built up into a square-shouldered, muscular man by four years of crew.

What about training rules? Clean living is the byword. A crew man needs no proctor to hold a club over him; if he stays up late one night, if he eats foolishly or indulges in excesses of any kind, he pays the price ten times over on the water the next day. Every cigarette he has smoked, every bit of rich pastry he

has gobbled, drags on the end of his oar like a lump of lead. A crew coach needs no one to tell him when a man has broken training.

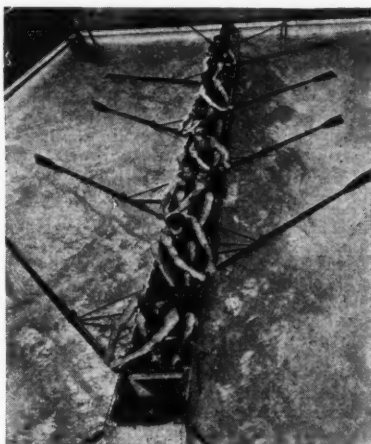
The Crew Man Is a Marked Man

More and more I notice, as my experience grows in both East and West, that crew men are universally looked up to in the colleges. Rowing is the king of university sports. The men go through the hardest training grind of all; they are amateurs in the fullest sense of the word, for rowing produces no gate receipts for the universities and schools that support it.

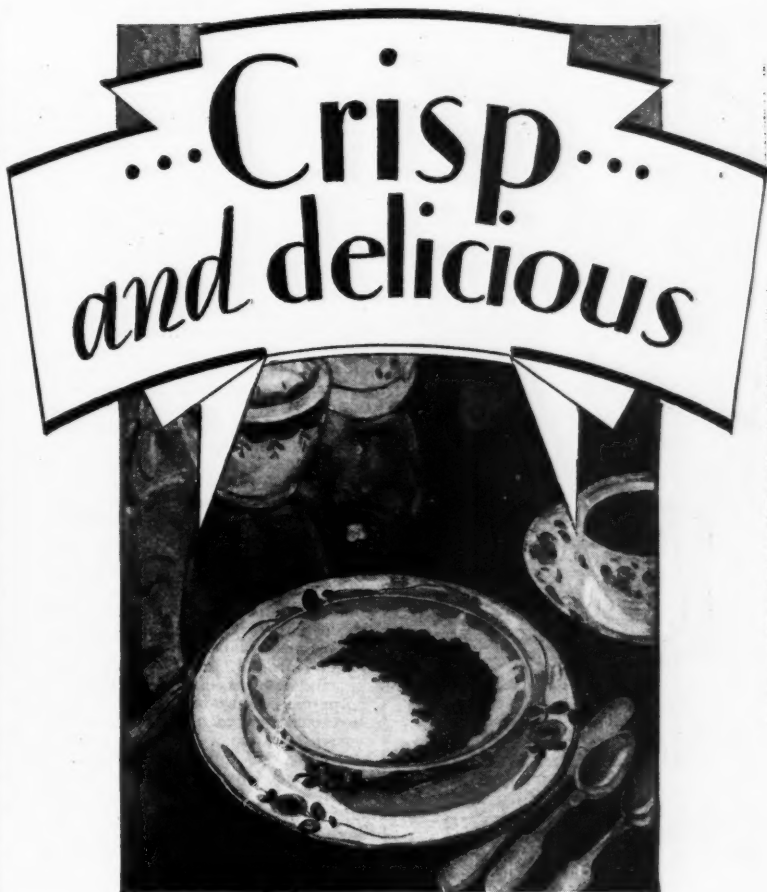
The crew man has the spirit and the will to win. He has learned courage, patience, determination and self-control, or he would not be on the crew. He has learned self-sacrifice, for rowing has no "stars"—by which I mean men who are picked out for absurd and often ruinous adulation by the newspapers. Yet rowing has its stars, a real constellation of men who have proved themselves great oarsmen in every sense of the word. Let me run over a few names from recent crews, prior to the present season, since this article is written before the great 1928 races at Poughkeepsie and New London and on the Schuylkill.

There are far too many recent heroes of rowing to be all mentioned here. But some of them are Brodil and Wiberg of Columbia; Donaldson and McMillan of California; Lange, Anderson and Emerson of Cornell; Spock, Kingsbury and Carpenter of Yale; Irmiger and Goetz of Pennsylvania; Johnson, Teckemeyer and Benton of Wisconsin; Phifer, Thomson and Howard of Syracuse; Hobson, Henry and Hubbard of Harvard; Spohn, Ulbricksen and Dutton of Washington; Becker and Helmrath of Princeton; and King, Sanborn, Frawley, Watson and Eddy of the United States Naval Academy.

A crew could be picked from this list that would surely beat any single crew rowing today. Yes, I am considering physical condition as well as skill; for these graduates have learned by practice the great lesson of how to live and to row. They could come back and conquer, because if you are once a real oarsman you will remain one for years.



Times-Wide World Photo
Practice indoors is used at the start of the season



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MY ANSWER TO THE CHALLENGE OF THE SOUTH

[CONTINUED FROM PAGE 379]

Physical failure is our only fear. Entirely unpredictable, it may crop up in the least expected places. The best known example of it occurred during Scott's tragic expedition to the South Pole. One of the mainstays of the little party on the final dash was Petty Officer Evans, whom Scott referred to as "our strong man." Yet when the group began to die of exhaustion and exposure, Petty Officer Evans was the first to go, and his death was one of the factors, almost without a doubt, in the final catastrophe.

Gauging a man's physical reaction to hardship and cold is difficult, and hardship and cold, sleeplessness and nerve strain, will be, in greater or less degree, the portion of all of us. The conditions at the poles are so different from anything met with elsewhere that there are no standards to go by; the evidence that a man can stand up under them, until he has proved it on the spot, must be mostly what lawyers term circumstantial. But I believe implicitly that all my companions will come through; with no other belief could I possibly start on such a journey as we contemplate.

The man who was to have gone with me as second in command will not be with us. Floyd Bennett, great aviator, friend and companion in many a dangerous enterprise, died in line of duty last May. His place in the planes will be taken by Chief Petty Officer Harold I. June, U. S. N., a pilot of skill and long experience. Little known to the public because his flying has been confined to non-spectacular achievements, he is, nevertheless, one of the ablest pilots in the Navy. His colleague as pilot-mechanic will be Bernt Balchen, the young Norwegian who returned from Spitzbergen with me, and who flew on the transatlantic flight of the America. He was at the controls when we landed at Ver-sur-Mer. With myself as pilot-navigator, they will probably form the crew of the Ford tri-motored plane Floyd Bennett on the flight to the pole.

The chief engineer of the expedition will be Thomas B. Mulroy, who went with me on the North Pole expedition, and did sterling work both in the engine-room and on shore.

The Marine Corps will be represented by the two mechanics who will keep the planes and tractors up to par, K. F. Bubier and Victor Czegka. Bubier was assigned by the Marine Corps, and Czegka was granted leave of absence to be able to go with us. On these two men will rest the great responsibility of caring for the sensitive motors of the three planes. The newspapers will give them—to judge by the past—little credit. All the mechanics do is to put the engines in com-

mission, and that is not enough to excite any very general enthusiasm. Who recognizes the name of "Doc" Kinkade today? Probably not one person in a hundred. Yet he is the wizard of the Wright Aeronautical Corporation and the man who tuned up the engines that carried Lindbergh, Chamberlin and myself across the Atlantic. Without his genius those flights might never have been made, yet he is too modest and self-effacing to crowd—or be pushed—into the limelight. And there are dozens of others like Kinkade. I hope the time will come when they are more generally appreciated.

In charge of our extensive radio equipment will be Malcolm P. Hanson, civilian employee of the Naval Research Laboratory, assigned by the Navy to the expedition. Hanson stowed away to go to the North Pole with me, and through continued hard work kept our radio apparatus in perfect condition. He is one of the country's foremost experts on the subject. With him will be associated Leo V. Berkner, assigned by the Department of Commerce, Lloyd K. Grenlie, an ex-marine who was associated with Hanson in the North Pole work, and H. F. Mason, who has been with Wilkins. The apparatus under their care will be, so far as I know, the most extensive that any polar expedition has ever carried, and all four are even now finding their hands full.

William C. Haynes, otherwise known as "Cyclone" Haynes, meteorologist of the United States Weather Bureau, is our meteorologist. His services are made possible through the generosity of the National Geographic Society. Haynes was another of our North Pole group, and while at Spitzbergen he produced weather as nearly perfect as could be desired. I hope he will be able to do as much on the opposite side of the world.

Although I expect to do a certain amount of geological work myself, our expert in that line will be L. M. Gould, of the University of Michigan. Since some of the most important questions regarding Antarctica turn about geology, his job will be an exacting one.

In addition to these two scientists the Guggenheim Foundation is giving us the services of an aerologist, but at the time this is written he has not yet been chosen.

I wish it were possible to say a word about all of the nearly sixty men with the expedition, but unfortunately lack of space prevents me. All of them will be essential parts of our machine—of our team, I might say, for an expedition has one thing at least in common with a football team: both depend on the perfect functioning of every individual.

I should like to tell you about Richard G.

Brophy, business manager of the entire outfit, Doctor Coman, Davies, who will be our physicist and glaciologist, and many others, but that is impossible now. Doubtless the newspapers will contain full details later, and to them, if you are interested, I refer you.

The Challenge of the South

Men and equipment, months of forethought and minute preparation, are part of my answer to the challenge of the South—almost the last great challenge left to the explorer. To meet that challenge—and to conquer it—is the purpose of our expedition.

What a better knowledge of the barren Antarctic continent will do for humanity is not for me to say. I believe for one thing that it will make the enormously important problem of predicting weather conditions much easier to solve accurately than it is at present; for another, that it will add a great deal to our knowledge of geology, and may possibly open up new supplies of minerals, and even coal and oil. These supplies cannot be worked at once, but with the rapid depletion of reserves in temperate climates, the knowledge of the existence of vital necessities elsewhere will be of value in the future.

Such results will be practicable and tangible, but there will be many others not so obviously useful: pages of observations, for instance, that may seem to have no immediate use. Perhaps in the end they will actually prove to have none at all. On the other hand, they may some day supply the missing link in an otherwise insoluble problem.

There are questions of geography to be determined: whether the chain of the Rockies and the Andes runs across the bottom of the world and up through the Australasian islands and the Himalayas, to form an immense world-spanning girdle; whether there are more active volcanoes lost in the polar ice than the two known at present, Mts. Erebus and Terror, and if so, what relation they bear to the formation of Antarctica. There are dozens of other facts to be investigated or discovered, and all of them will have particular interest to some branch of science.

So much for science. The primary purpose of our expedition, as I have told you, is scientific—the study of new lands and new knowledge; but I must confess that the instant when we drop from our plane the flag of the United States, to rest for the first time at the world's farthest south, as it has for so long at the farthest north, will be for me the greatest moment of the expedition.

NOW YOU TELL ONE!



The Companion will pay \$1.00 for each original joke that is accepted for this column. Only the best of the thousands that are sent us can be used and paid for. We can not undertake to return those that are not accepted.

WHAT HE WANTED

HE was earnestly but prosily orating at the audience. "I want land reform," he wound up; "I want land reform, I want educational reform. And I want—" Said a bored one in the audience, "Chloroform."

A SEA DOG

WILLIE'S reading lesson was about ships. He came to a word he could not pronounce. "Barque," prompted his teacher. Willie looked at his classmates and laughed. "Barque," exclaimed the teacher harshly. Willy looked up at his teacher and said, "Bow-wow."

A LONG WET SPELL

THE Sunday-school lesson was from 2 Kings, xxii-1 and read, "Josiah was eight years old when he began to reign, and he reigned thirty and one years in Jerusalem." On telling about the lesson to his mother, Paul, aged four, said, "The lesson was about a good rain, and there was a little boy named Josiah, and it began to rain when he was eight and when he was thirty-one it was still drizzlin'."

—Mary E. Foster

JUST PLUMB LAZY

RASTUS, your dog seems to be in pain." "No, suh, he ain't in pain. He's just lazy." "But surely he must be suffering, or he wouldn't howl like that." "Jes' plumb laziness; he's sittin' on a thistle."

—Mrs. Roy P. Keith

OUR VEGETABLE ZOO



Drawn by D. T. Corliss

V. The Hippopotamustard

A TESTIMONIAL

IS this a healthy town?" asked a stranger. "It most certainly is," replied the native. "When I came here I couldn't utter a word; I had scarcely a hair on my head; I hadn't the strength to walk across the room and had to be lifted from my bed."

"That is wonderful; how long have you lived here?"

"I was born here," was the reply.

—Howard Weese

AND WORKING HARD, TOO

THERE was no one at the table except the landlady and Mr. Bangs, and the latter was doing his best to cut a piece of steak on his plate.

"Mr. Bangs," said the landlady very firmly, "when are you going to pay your board?"

"Beg pardon, ma'am."

"When are you going to pay your board?" "I didn't know I had to," he said. "I thought I was working it out."

—Anna Mae Stafford

SMITHOLOGY

DURING a recent visit to the home of the Jones family, I related an ancient legend, and after I was gone Bobby asked his mama, "Was it really true what Mr. Smith said about those goddesses?"

"Oh, no," his mother replied. "That's mythology, and isn't supposed to be true." Some days later I was telling them about the wonderful intelligence of my favorite horse. After I had gone home little Beth said to Bobby, "Do you suppose it is true—that Mr. Smith said about old Molly?"

"Naw," replied Bobby; "that's just some more Smithology."

—Glen G. Smith

THINGS WE TALK ABOUT

THIS COLUMN—Every letter sent to the editor of The Youth's Companion is answered by a personal letter. This correspondence is often of such wide interest that, for many months, we used to publish some of it under the title "Things We Talk About." Then we gave this column a rest for a while; but so many readers have urged us to bring it back again, saying that it brought them into touch with kinsfolk all over America, that we do so now with very great pleasure.

MR. ARTHUR N. INGERSOLL, of Maplewood, N. J., is a veteran reader of The Youth's Companion; and he not only reads it—he works for it, too. He writes to us: "My interest in increasing the circulation of The Youth's Companion has chiefly been so that young people might have the kind of reading matter that both satisfies and improves. I was born, on August 31, 1845, in the middle of a dense wilderness, which is now the state of Michigan.

"Aunt Emily, my father's sister, made us a visit about the year 1852, bringing us a generous bundle of Youth's Companions. How we enjoyed them is beyond description. I was second in a family of nine, and we were starving for something to read. One of the issues contained that famous poem 'Darius Green and His Flying Machine' by your dear old contributor, J. T. Trowbridge. What a pity he could not have lived to see the modern fulfillment of his vision!

"In those days, the clearing and improving of a farm was attended by hardships, but it developed patience, ingenuity, courage and a love of all useful things. There were few books, no newspapers, no schools. The postage on a letter from the Eastern states was 25 cents, c.o.d. Money was always a very scarce article. Business was mostly done by barter and exchange."

The lessons of patience and ingenuity learned on that pioneer farm have borne marvelous fruit, every Companion reader will agree, for it is the Ingersoll family that gave us, through their dollar watch, this country's first great lesson in mass production, with its increased wages for the workers, and its lower costs of the various manufactured articles we buy, such as Ingersoll dollar pens, Ford cars and other automobiles, Gillette safety razors and blades, and a host of others unknown to our pioneer fathers and mothers and their families.

MR. HERBERT HOOVER, Republican candidate for President of the United States, discussed his boyhood in an interesting speech before the Iowa Society, in Washington, a short time ago. He said: "My brother, older than I, had read in The Youth's Companion full directions for securing live rabbits. He proceeded to instruct me to stand still in the cold snow and to hold up the rabbit by its hind feet, while he applied the method. The resistance of the rabbit was too much for me. I was not only blamed for its escape all the way home, and for weeks afterward, but continuously over the past forty years. I have sometimes thought I would write to The Youth's Companion and suggest they make sure that this method is altered."

Mr. Hoover's letter will be very welcome when he writes it, and we will gladly give him later and better information than The Companion could supply so many years ago.

MRS. S. J. RIFE writes from Lemoyne, Pa.: "In my home we had The Youth's Companion always, and now my children have it. When they are too young to read fast or well enough themselves, they always understand and enjoy Companion stories read aloud by older people.

"We had never heard of Massachusetts Institute of Technology except through your pages, but my thirteen-year-old boy is going there, if all goes well. All the articles about Edison and Steinmetz I read to him, and he is now so enthused by the Y. C. Lab that he doesn't wait for me to read it to him. He is making a four-tube radio set. He is so busy, and I feel that he is on a good road, thanks to The Youth's Companion. We couldn't do without it. Inclosed please find check for our next year's subscription."

SAMUEL B. MAYO writes from Durham, N. H.: "I have received my copy of the bigger and better Youth's Companion. I think it's five times better than before."

MRS. LUCY R. FULTON, of Berkeley Springs, W. Va., writes: "After looking over the new Companion a little and reading a few of the stories, my fourteen-year-old boy said: 'It is better than ever. Mother, we can't possibly get along without it.'"

BARRINGTON MOORE, a student at St. George's School, Newport, R. I., writes: "I would like to tell you that the new monthly Companion is indeed better than the older form, offering room for more and better things."

Moore is among the hundreds of Youth's Companion readers who have built and are now sailing the Y. C. Lab knockabout designed for the A. B. C. class by Mr. John G. Alden of Boston. Moore's boat has been very frequently raced against another one-design class in the Sakonnet River, R. I.

MRS. J. T. ANDERSON, of Dodge City, Kan., writes: "I really did not think there was a magazine in America today fit to read until I came across the current Companion. I supposed you had gone the way of all the others, but I see you are still putting out a wholesome, uplifting, inspiring and genuinely American magazine."

"I have looked through The Companion's ads and find only those that are clean and useful. I find none of the objectionable cigarette ads put out to entice the girls of America to smoke. I am happy that the tone of your paper maintains its high standard of morals, character and decency, and am sending you my subscription to 'the good old magazine.'"

WITH LETTERS OF THIS KIND heaped on the Editor's desk, in such numbers that he often works far into the night in the effort to reply to them, it seems a pity that this whole number cannot be given to these letters from our friends, and their pictures. But every month we hope to print some of them; and you can be very sure, when you write, that your letter and subscription will be most gratefully received by us.

Companion readers, authors, artists and editors are all one great family, with its roots in the early dawn of American and Canadian civilization. When, for instance, an artist named Allen illustrates our serial story, or another artist named Bull paints for us one of his superb animal cover designs, hosts of other Allens and Bulls like to greet their cousins through the mail. Any letter addressed to one of our artists or authors will be promptly forwarded if sent to this office—and there is nothing pleasanter than to reward a painter or writer by a word of commendation, whether you happen to be related to him or not.

If you have not formally joined the great Companion family circle, now is the time to do so, before the autumn rush begins. Between the first of October and the first of January, we receive a great many thousand new subscriptions and renewals. Come early and avoid the rush! Remember that you are not merely taking a magazine—you are allying yourself with one of the oldest of all American business institutions, made up of people who are your friends and can help you in a great many ways that you may never have thought of.

Use all The Companion's departments. Helen Ferris is eager to hear from you, if you are a girl or a woman. The Director of the Y. C. Lab, the Editor of our Miscellany Pages, the Contest Editor and all the other members of this staff are delighted to hear from boys and men.

POSTSCRIPT—Next month we shall start a splendid new department, dedicated to Sport and directed by a group of distinguished sportsmen who are the nation's leaders in baseball, football, basketball, track, tennis, golf, swimming and other body-building and character-forming games. Watch for this new department; it will mean much to you.



"The llama is sometimes called the 'mountain camel'. It is used as a beast of burden in the Andes, the formation of its feet enabling it to walk on slopes too rough or steep for any other animal."

Cling like the llama!

On Scout hikes or exploration trips, it is a great help to have the sure, firm footing that you get from wearing Zippys.

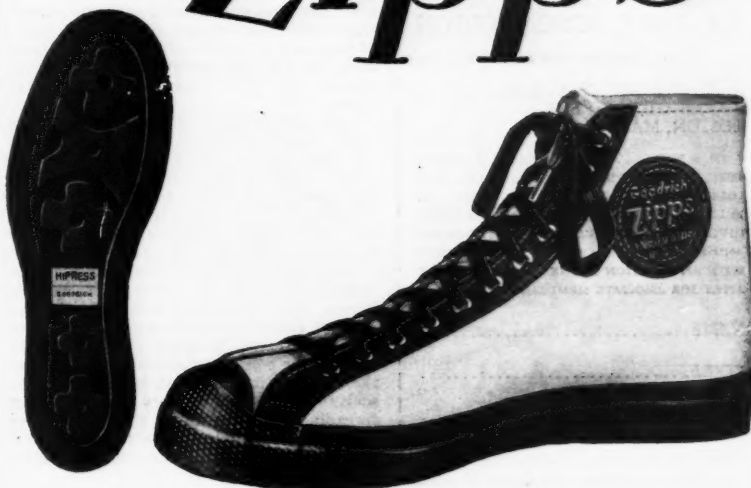
The model shown in the picture below has a regular "vacuum grip" sole. It has a wide, continuous rib of rubber running around the edge of the sole. In addition, there are thick rubber blocks near the toe, under the ball of the foot, and at the heel.

There's a scientifically designed safety sole for you! The rest of the shoe is just as good. Strong white duck top—corrugated rubber toe protection—black rubber trim.

That's just one of a dozen models of Zippys—there is one for every sport. Be sure to see them, at the dealer's where Goodrich footwear is sold.

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Established 1870, Akron, Ohio
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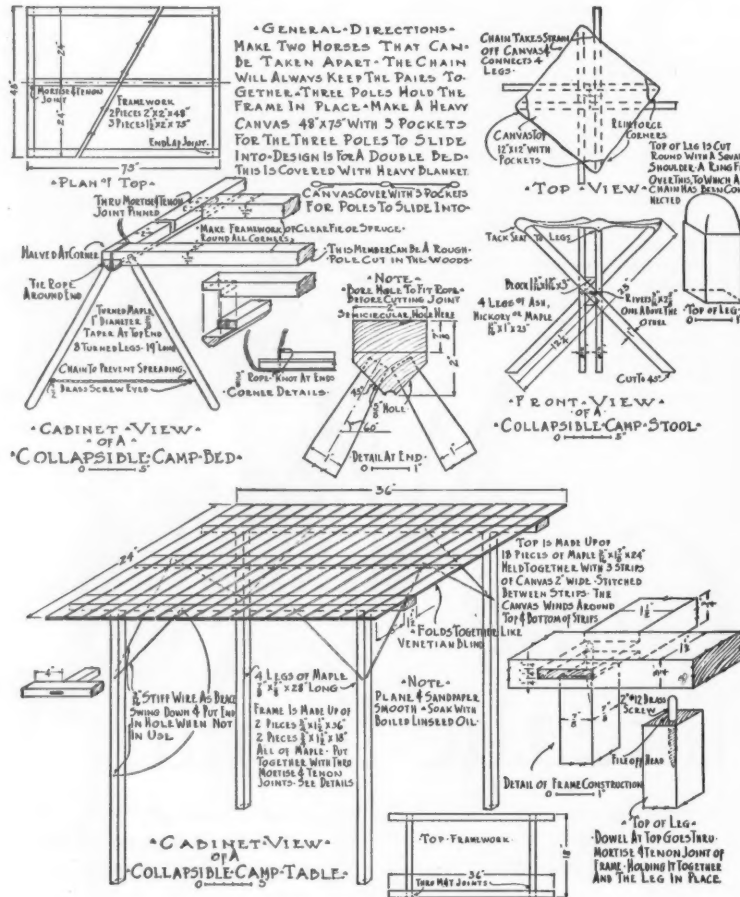


TO SECURE THIS MEMBERSHIP INSIGNIA, THE FIRST STEP IS TO USE THE COUPON BELOW

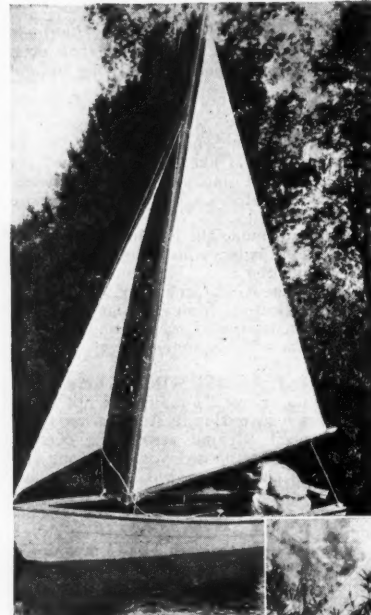
THE Y. C. LAB

THE WORLD-WIDE SOCIETY FOR INGENIOUS BOYS

THIS SEAL ON MANUFACTURED PRODUCTS CERTIFIES TESTS MADE BY THE Y. C. LAB



Two New Buccaneers in a Far-flung Fleet



Above, the *Buccaneer Where Away*, built by Associate Members Harris and Dallas Dusenbery, and launched on the Columbia River in Oregon. Oregon cedar, spruce and fir were used in its construction. Right, the second *Buccaneer* built by the boys of the Indian River School, New Smyrna, Florida, under the direction of Headmaster William A. Buell

EVER since our June cover showed the Lab's famous knockabout *Buccaneer* under sail, and in full colors, there has been a flood of inquiries and orders for the knockdown parts. Every time of year is the right time to build yourself a sailboat. But if you contemplate building and sailing in northern waters this season, write immediately to the Director, Y. C. Lab, for price lists and specifications.

Two of the newest *Buccaneers* are pictured here. One was splendidly built by Associate Members Harris and Dallas Dusenbery of Portland, Ore. They used paper patterns supplied by the Lab, since in their case it would have been less economical to pay the freight on the knockdown parts. Usually, the reverse is true. It takes several weeks longer to build from the patterns, and the time factor should be figured. The Dusenberys christened their boat the *Where Away*.

The other cut shows the second *Buccaneer* built by the boys of the Indian River School of New Smyrna, Fla. Headmaster William A. Buell reports that "both boats are a great asset to our recreational life."



Building Camp Furniture

By William A. Klenke

Use This Coupon

Mail It to the Director Today

ALL around you today, in your own neighborhood and in every other part of the world, boys are signing this coupon and mailing it to the Director, Y. C. Lab. If you want to know what it can do for you, turn now to the Secretary's Notes, page 410. If you have meant for some time to send it in, do so today. You will receive by return mail some information that will surprise you, and that may be the stepping stone to real success and happiness in your present life, and in manhood too.

Y. C. LAB ELECTION COUPON

To be filled out and mailed to

THE DIRECTOR, Y. C. LAB
8 ARLINGTON STREET
BOSTON, MASS.

I AM A BOY..... YEARS OLD. I AM INTERESTED IN SCIENTIFIC, ENGINEERING AND CONSTRUCTIVE WORK. PLEASE SEND ME BULLETIN NO. 20 OF Y. C. LAB INFORMATION, GIVING FULL PARTICULARS OF ITS FINANCIAL AND SCIENTIFIC BENEFITS TO ME, TOGETHER WITH AN ELECTION BLANK ON WHICH I MAY APPLY FOR ASSOCIATE MEMBERSHIP.

NAME.....

STREET.....

TOWN.....

STATE.....

FOR summer camp or cottage no furniture is more convenient than the type illustrated above. Easily made, easily kept clean, and conveniently collapsible, so that it can be packed about in the woods with a minimum of trouble, it answers all the requirements for rough usage. The table is made with a top on the principle of a Venetian blind, and when the legs have been taken off can be packed up into a very small space. The framework for the top is made first, with through mortise and tenon joints as illustrated. The legs are then shaped up and screwed to the framework. Braces made from stiff wire about 3/16 in. in diameter keep them upright. The top of the table is made of eighteen pieces of thin maple sewn between two pieces of wide tape, so that it can be rolled up like a blind. The completed table has room for four people, and can even accommodate six, if necessary. If you want a lighter table, make the frame of 3/4 in. by 1 in. material, the legs 3/4 in. square, and use fir or spruce instead of maple.

The stool is even easier to make than the table. Plane four pieces of stock to size for the legs and one block for the pivot. Be careful when boring the joining holes that they do not run into each other. A chain reinforcement, as shown in the upper right-hand part of the drawing, is used to keep the canvas seat from tearing at the corners.

The principle of the bed is simply that of a frame laid across two collapsible wooden horses. The framework can be either of finished timber or of strong poles finished only at the ends. The horses are formed from two smaller poles which have been turned at the ends so that they can be inserted into sockets in the frame. They are kept from spreading when set up by short lengths of chain. When completed, the frame is fitted with a canvas cover, over which a heavy blanket is laid.

New York Yacht Club Routine

Extracts for Use of Y. C. Lab Members

EVERY yacht owner, be his vessel large or small, wants to do things in the proper way—"shipshape and Bristol fashion." Sloppiness on the water is a crime! By gracious permission of Commodore Vincent Astor and Secretary George A. Cormack, of the New York Yacht Club, most famous of all yacht clubs in America, the Y. C. Lab is privileged to reprint the following important extracts from "The New York Yacht Club Routine." Follow them scrupulously, and you will have the satisfaction of knowing that you are doing things in the best way they can be done.

Ensign. At anchor, the United States yacht ensign shall be displayed at all times between morning and evening colors. When under way, the ensign shall be displayed when in inland waters, when meeting or passing other vessels, and on approaching light vessels, lighthouses, signal stations, military posts, or towns.

Sailing yachts when under way shall display the ensign at the after peak. When at anchor sailing yachts shall display the ensign from a staff at the stern on the starboard side of the boom. (The ensign shall never be made up and broken out.)

Burgee. The burgee shall be displayed by yachts in commission as herein prescribed whenever the ensign is hoisted:

On a single-masted yacht, at the truck when at anchor.

Private Signal. The private signal shall be displayed by yachts in commission as herein prescribed, whenever the ensign is hoisted:

On a single-masted yacht, at the truck when under way.

Size. The burgee and the private signal should be in length one half of one inch for each foot of height of the truck from the water, and in width two thirds of the length.

Absent Flag. The absent flag is a rectangular blue flag. It should be displayed during daylight at the starboard main spreader when an owner is not on board.

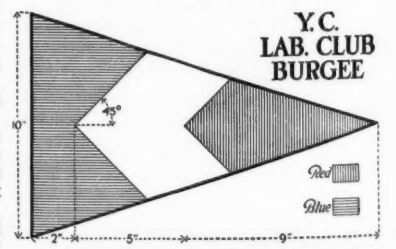
Meal Flag. The owner's meal flag is a rectangular white flag. It should be displayed during an owner's meal hours at the starboard main spreader.

Colors. Yachts-in-commission shall make colors at eight A.M. and at sunset.

The ensign shall be half-masted only on occasions of national mourning. On the death of a yacht owner, the burgee and private signal shall be half-masted on his yacht. When mourning is ordered for the death of a member, the burgee only shall be half-masted.

Salutes. Whistles shall never be used in saluting upon joining the squadron during the annual cruise. The Commodore shall be saluted by all yachts present, with one gun. All salutes shall be answered in kind. Yachts not carrying guns shall salute by dipping the ensign once. No guns shall be fired on Sunday.

[CONTINUED ON PAGE 410]



The burgee especially designed by Councilor F. Alexander Magoun, for the use of Y. C. Lab Members' *Buccaneers*. It can be made of any strong colored cloth from the design shown



It's New only \$1.00

Why not learn all about Aviation! This book tells you in plain English. 128 Pages and 49 Illustrations.

In building model aeroplanes or gliders, this book will prove most helpful.

USE THIS COUPON

ROTH-DOWNS AIRWAYS, INC.
2522 UNIVERSITY AVE.
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Here's my dollar. Rush me postpaid a copy of "The Modern Airplane."

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Address.....

**Fellows,
it's the real thing!**

THERE'S an Eveready Flashlight made to order for Boy Scouts. It's a fine-looking flashlight, olive-drab in color to match the uniform and decorated with the official Boy Scout insignia. Endorsed by headquarters.

It focuses. And it fastens to your belt or your shirt-pocket with a clip, and leaves both your hands free. There's a ring-hanger on the end of it, too, so that you can hang it up. The safety-lock switch prevents accidental lighting.

It has all the well-known features that have made Eveready Flashlights first in quality, materials and popularity. Ask to see the official Boy Scout Flashlight, Eveready No. 2697.

A NEW hobby LEATHERCRAFT

Lots of fun making beautiful, useful articles and novelties of leather. Book covers, pocketbooks, waste baskets, bags, belts—everybody in the family will find something they'll want to make. Complete, easy-to-follow patterns—tools and craft leathers at small cost.

Send this advertisement with 10c for the 96-page Leathercraft book that tells all about leather working at home—and how to start in.

GRATON & KNIGHT CO.
WORCESTER, MASS.

The Honors List for August

Eleven new Members of the Y. C. Lab receive cash awards and national publicity for ingenious projects



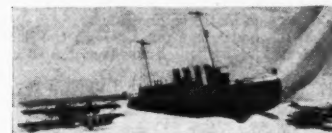
1: Member Merrell's project

THIS month many of the projects on the Honors List are aeronautical. Headquarters has permitted this heavy emphasis on aviation because it is significant of the lively and effective interest of Lab Members in this great new science.



2: Member Pearson's project

Illustration No. 1 this month shows the "Meadow Lark," model airplane designed by Member Creighton Merrell (16) of Newton, Kan. It is a 3-passenger biplane designed for a 150-horsepower Hispano engine. Member Merrell took an unusual amount of pains in the building of this remarkable little ship and spent more than a year in its construction. Member John Pearson (17) of West Branch, Iowa, that

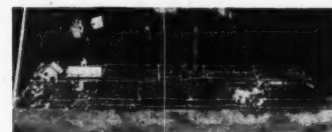


3: Member Spurling's project

admirable junior scientist and constructor, is once more represented, this time by the splendid model of a Spanish galleon pictured in Illustration No. 2. This model has the enthusiastic endorsement of Lab Councillor F. Alexander Magoun, S.B., S.M. Member Nelson E. Spurling (17) of Cranberry Isles, Me., is the constructor of the 12-in. model of the U. S. torpedo-boat destroyer "Pruitt" shown in Illustration No. 3. The Pruitt was built close to Member Spurling's home town during the World War. An 8-in. model of a Barling bomber and a hydroplane are also shown in the illustration. Member Clifton Rodgers (13) of Beaver, Pa., is the constructor of the gasoline shovel shown in

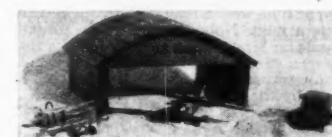


4: Member Rodgers' project



5: Member Voss's project

Illustration No. 4. Illustration No. 5 shows a model farm constructed by Member Victor Voss (14) of Garber, Iowa. Member Voss has been painstaking down to the last detail and has peopled the farm with hens, roosters,



6: Member Treichler's project

baby chicks, horses, cows, calves and sheep, all made of celluloid. He has provided a tractor, plough, truck and wagon and furnished an excellent ground plan with his

descriptions. To Member Lorin F. Treichler (14) of Dunellen, N. J., goes an award for the construction of two model airplanes, a hangar and a truck. The hangar is 12 in.

long over all and 13 3/4 in. wide. The balance of the equipment, as shown in Illustration No. 6, is done to scale. A model of Lindbergh's "Spirit of St. Louis" is shown in Illustration No. 7—the work of Member Warren Godfrey (16) of Peabody, Mass.

It is not a working model, but is done closely to scale. Illustration No. 8 shows Member Clement Gaines, Jr. (15) of Beacon, N. Y., with his two airplane projects. The biplane



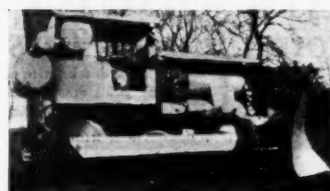
8: Member Gaines's project

is one of the old "JN" type. The monoplane on the right is of more modern construction. Still another aeronautical constructor is

Member John Langley (12) of Peterboro, Ontario. Illustration No. 9 shows him with a model of a DeHavilland battle plane. An older Member is Philip Schaub (18) of Sauk Center, Minn., who has constructed a model tractor snow plough. He estimates that it took from 32 to 40 hours of constant work to construct. The model is made entirely of gumwood save for the struts. As seen by Illustration No. 10 the model is driven by a motor run by four dry cells and moves at a slow walking pace. Member Stanwood Sterling (13) of Peak Island, Me.,



9: Member Langley's project



10: Member Schaub's project

is the constructor of a small sloop model, shown in Illustration No. 11. It is 32 in. long, including the bowsprit.

If, like the Lab Members who made the models above, you are interested in aeronautics and the new developments in the science, turn now to page 395 and read the newest department—"The News of the Air." Notice particularly Commander Byrd's note of introduction, with its first sentence: "It is my firm conviction that the future of America is inextricably bound up with that of aviation." The Youth's Companion shares this conviction completely.



11: Member Sterling's project



Mechanics who groom the high powered racers which hurtle across the beach at Daytona must know how to file quickly and well.

Many of them use Nicholson Files for cleaning electrical contacts, fouled spark plugs, fitting piston rings, smoothing down rejoined feed pipes and for numerous other jobs.

You will find Nicholson Files useful on the family car for the same reason that these mechanics prefer them: they cut faster, last longer and feel right in your hand.

Your hardware dealer can supply you with Nicholson Files for every filing need.

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—A File for Every Purpose

Russell Jennings Standard Bits



They are standard throughout the world and more extensively used than any other bits.

Tested and approved by the Y. C. Lab

Sold singly in all sizes or in complete sets in hardwood cases or canvas roll.

Supreme satisfaction and a lifetime of service.

APPROVED AFTER TEST BY THE Y.C. LAB

Russell Jennings (Precision) Expansive Bit



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THE RUSSELL JENNINGS MFG. COMPANY CHESTER, CONN.

Off to a Running Start



BE ready to win a place in your school band. Start studying now. And make certain of success by choosing a King. For here is a proven instrument that is bound to make learning faster—playing better. Every King is built to the highest professional standards—every one is guaranteed in writing. Let us tell you about your favorite instrument. Let us show you how easily you can own the best.

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Send me full information on the instrument I have checked.

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☐ Saxophone ☐ Trumpet ☐ Trombone ☐ Alto
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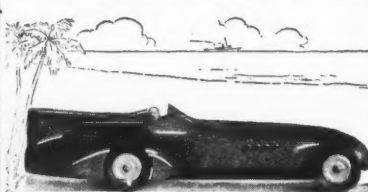


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[CONTINUED FROM PAGE 408]

Yachts passing shall salute, the junior saluting first.

When coming on board or leaving a yacht, the quarter-deck shall be saluted by touching the cap.

Precedence. The order of entering and leaving boats is—juniors enter first and leave last.

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when ordered on other occasions, a yacht in commission shall, when at anchor and the weather permits, dress ship at eight A.M. from morning till evening colors. When these days occur on Sundays, the ceremony shall be postponed until the following day. In dressing ship, rectangular flags should alternate with pennants. Flag officer's flags and the burgee shall not be used in dressing ship.

A Glossary of Nautical Terms

Abeam: in line with the direction of the ship's beam

Aft: near or towards the stern (rear end) of a vessel

A-lee: the helm is a-lee when the tiller is put to leeward

Back away: go in the reverse direction

Bear away: turn from

Before the wind: in front of, or in the direction of the wind

Belay: make fast; secure

Boom: a spar used to hold the bottom of a sail By the lee: sailing in the direction of the wind, with the boom over the side of the ship which is toward the wind, and sailing so that the vessel is likely to jibe at any moment. (The boom should be over the leeward side.)

Close hauled: sailing as nearly into the direction from which the wind is blowing as possible.

Come about: change from one tack to another

Come up: to have the bow turn toward the wind

Draft: the depth of water necessary to float a boat

Fall off: to have the bow turn away from the wind

Foremast: the rope which runs from the top of the foremast to the stem or the bowsprit, and braces the mast against falling backward

Gunnwale: the upper part of the boat's side

Heave in: pull in

Heel: to lean or tip to one side

Helm: a wooden bar put through the head of the rudder by which to steer. Also called a tiller

Jib: a triangular sail carried upon a rope ex-

tending from the top of the foremast to the bowsprit, or to the stem if there is no bowsprit

Jibe: to shift the boom from one side of the boat to the other with the wind coming from astern

Leeward: the direction toward which the wind is blowing

Lee-way: sideways drift of a vessel away from the wind

Luff (noun): the edge of a sail which is next to the mast or to the stay to which it is attached

Luff (verb): to turn the bow into the wind in order to alter the direction in which the boat is sailing

Pay off: let the bow turn away from the direction from which the wind is coming

Quarter: that part of a vessel's sides which are just forward of the stern

Running free: sailing with the sheets payed out; on any course between close hauled and dead before the wind

Sheet: a rope attached to the boom by which to hold the sail in position, against the pressure of the wind

Stand by: an order meaning "be prepared"

Tack: changing the course by bringing the bow up to the wind until the wind fills the sails from the opposite side of the ship. The side which was the lee side then becomes the weather side

Weather bow: the side of the bow toward the wind

Windward: the direction from which the wind is blowing

Yaw: moving off the direct line of the course.

Questions and Answers

Q.—I am building a steam traction engine, and I am planning to use a Ford gasoline tank which holds nine gallons, for a boiler. How many pounds of steam do you think it ought to hold? I wish to use a homemade engine of about 1/16 horsepower. Can you tell me where to get a book at a fairly low price which tells how to construct steam engines about this size? Could you tell me how to make a low-pressure steam gauge for my engine? Also I would like to know how to make a safety valve. Associate Member Wayne Stucker, Route 3, New London, Iowa.

A.—By Councilor Townsend: The use of old gasoline tanks for any purpose other than for holding gasoline is apt to be attended by dangerous results. Many serious explosions have occurred when persons, thinking that the old tanks were entirely free of fumes, tried to use the tanks, especially around a flame. Also, the tanks are not of the proper shape to withstand pressure and, further, are made of too thin material to be safe even at low pressure. I would seriously discourage the use of the Ford tank for the purposes you suggest.

The manufacture of a small steam engine that will run properly requires access to a machine shop or at least to a number of tools. It is no easy matter to build such an engine, and I prefer to discourage you in this project before you have spent time and money to no avail.

I know offhand of no book which will give plans or constructional detail of steam engines of the size you suggest. Boucher, Inc., 415 Madison Avenue, New York City, might be able to help you in this respect.

A low-pressure gauge may be made by bending a piece of glass tubing into a U-shape and filling it about half full of mercury. Connect one end of the tube to the pressure to be measured. The level of mercury in the two tubes will change, the difference indicating a certain pressure. Roughly, one inch of mercury equals one-half pound of pressure. From your pressure you will know how long to make the tube.

A good description of a safety valve is given in "Questions and Answers" on the Y. C. Lab page 786 for October 21, 1926. This will help you to build one from material which you may have at hand.

The Y. C. Lab Secretary's Notes

A VERY large number of applications for a membership have been received all this summer, to date. When the Lab was founded, years ago, it was thought wise to recapitulate its different virtues in every issue of The Youth's Companion. But now, with Associate Members and Members all over America, and in many other countries, too,—it seems as if the Lab needed no explanation from headquarters.

On the other hand, you may not fully realize the three great services the Lab can perform for you. As a famous author remarked the other day, the Lab is "the only thoroughly adult organization that a boy can join. It receives him as if he were a man, and treats him as if he were a man. Nobody orders him around. He stands on his own feet, wins his prizes through his own efforts, and bears disappointment in a manly way if he fails to carry off a prize. Many boys, by the mere act of joining the Y. C. Lab and receiving its personal letters, its certificate of membership and its insignia, take a giant stride forward into manhood."

The second great service of the Lab, as the years pass, is its educational value. It teaches boys, quite unconsciously, to write good letters. The Secretary has been amazed again and again to notice how the letters from Associates and Members improve during a few weeks of correspondence with Lab Councilors,

or with the Director. Every letter sent out by the Lab to boys is dignified, terse and grown-up. The Lab boy, with this example before him, learns to reply in the same fashion. And thereby he fits himself for life. While this unconscious instruction in expression is going on, the Lab boy can also secure technical advice, free of charge, on all engineering or scientific subjects that interest him. He may not realize it, but he is a corresponding member of the greatest technical school in the world, Massachusetts Institute of Technology.

In the third place, the Lab holds within its gift to any boy not merely one but several opportunities for resident higher education. More than one scholarship at M. I. T. is to be awarded by the Lab next month; and still other schools are constantly searching our membership for students to whom they can award scholarships of their own.

The boy who uses the coupon at the foot of page 408 is, above all else, intelligent. He knows how to take advantage of outside forces. He is not content merely to struggle along as best he can by himself; he puts himself in touch with the best engineering and scientific brains of America. The stimulus he receives cannot be overestimated. Just as, among the ancient Romans, the *loga virilis* was the symbol of manhood, so is membership in the Y. C. Lab the sign of a boy wise beyond his years.

THE simplest form of radio direction-finder, or "radio compass," is based upon the use of the familiar "loop," or "coil," antenna. Such a loop may be wound with turns all of the same size, on a square box-shaped frame, as indicated in Fig. 1A, or the loop may be wound in "pancake," or "pie," fashion, as indicated in Fig. 1B. The number of turns of wire on the loop and the size of the turns will depend upon the wavelength which is to be received, and upon the size of the variable condenser which is used to tune the loop. For broadcast reception suitable turns may be made as follows, for use with variable condenser of 0.0005 mfd. maximum capacity:

Loop	Number of turns	Side of square
1	16	18 inches
2	12	24 inches
3	8	36 inches

The turns should be spaced one quarter of an inch. Wire of sizes from 14 to 24, B & S gauge, bare or insulated, may be used.

The loop antenna is tuned to the wavelength desired by means of the variable condenser. The combination of loop and condenser is connected to a sensitive receiver, suitable for the wavelength range which it is desired to cover in the direction-finding operations. The loop should be arranged to be rotatable about a vertical axis, with some provision for reading the angle between the plane of the loop and a given reference line, as by a pointer and a scale graduated in degrees. The reference line for land compass stations is generally taken as true north; for ships and aircraft, it is generally taken as the center line of the craft.

Suppose a radio station is transmitting at some distance from the receiving point. If the signals are tuned in to their greatest strength on the receiver, and the loop is then rotated through one complete turn, it is found that the signals are very loud for two positions of the loop, these being about 180 degrees apart. The signals are very weak, or absent entirely, at two points approximately midway between the loudest signal points.

If these results are shown by means of a curve, in which the strength of the signal is laid off in the direction corresponding to the direction in which the loop is pointing, we obtain a curve such as that of Fig. 2B. Here the distances from the point O to any given point on the curve represent the strength of the signal received when the loop is pointing in that direction. When the loop is pointing north, or "zero" degrees, the signal received from the distant transmitter is indicated by the distance OA. As the loop is turned toward the right, the signals increase, as shown by OB, which is greater than OA. When the loop has been turned through 45 degrees, the loop points directly toward the distant transmitter, and the signals are loudest, as shown by OC. When the loop is turned to 135 degrees, the signals decrease to zero, as the loop is then placed

MODERN RADIO

Conducted by Y. C. Lab Councilor J. K. Clapp, S.B., S.M., Radio Engineer

Editor's Note: Councilor Clapp or one of his associates will be glad to answer any of your radio questions. Address him at The Youth's Companion, 8 Arlington Street, Boston, Mass. It will be necessary to disregard inquiries unless accompanied by a stamped self-addressed envelope

Direction-Finding for Ships at Sea and for Aircraft

Directional Receiving Equipment

with its plane at right angles to the direction of the distant station, as shown at D. When the loop has been turned through 225 degrees, it points directly away from the transmitter, but in this position it receives signals from the distant transmitter just as well as it did when at the 45-degree position, and the signals are again very loud, as shown by OE. At 315 degrees the signals are again zero, as shown by F; at 360 degrees, or after the loop has been turned once completely around, we are back at the starting point, and the same strength of received signal is obtained as when we began, namely OA.

It would appear at first as though, to determine the direction of the transmitter from the receiver, we should "point" the loop toward or away from the transmitter, since in either case we obtain the loudest signals. Actually, however, we note that when the plane of the loop is placed at right angles to the direction of the transmitter from the receiver, a slight change in the position of the loop produces a very marked change in the strength of the signals. When the loop is set to obtain the maximum signals, we find that the position of the loop may be altered quite appreciably before producing any marked difference in the strength of the signals. Because the minimum points of the curve are so much "sharper," or so much more pronounced, than the maximum points, the minima are actually used in making directional determinations.

Notice that the loop, as described above, has "eyes in the back of its head," since it receives equally well whether pointing toward or away from the transmitter. This difficulty makes the simple loop of no particular value, in most cases, in determining the true direction or true bearing of a distant transmitter; all that can be obtained from observations with the loop is the line of bearing of the station—that is, the direction of the line which passes through the transmitter and the receiver. The observations do not tell us on which side of the receiving point the transmitting station lies; for example, on a ship, if the observations show that the transmitter is exactly on the center line of the ship, we do not know, without some other information, whether the transmitter is "ahead" or "astern."

A loop is generally found to act to a very considerable degree as an ordinary antenna; that is, a certain amount of signal is picked up no matter what the position of the loop may be. The effect of this signal is to blur the minimum points, but one of the minima is generally blurred a great deal more than the other. The curve of signal intensity appears roughly as indicated by Fig. 3, instead of that shown in Fig. 2B. In this case the minimum at A is much more pronounced than the minimum at B. If a test is made to determine whether the sharper minimum point is obtained when the loop is set with one of its faces (or the other) toward the transmitter, then the direction of the distant transmitter may be determined, thereafter.

This effect may be greatly accentuated by combining signals from a loop and an ordinary antenna. While such systems are of much value in direction-finding for ships at sea, they require great care in operation and are not very reliable over large distances at night. Loop direction-finders of any type are not well suited to direction-finding for aircraft, particularly when such craft are flying so as to appear well above the horizon at the receiving point. In the discussion above we have considered only small loops—those at least small enough so that they could be easily turned about a vertical axis. Two large loops may be fixed in positions at right angles to each other and

disadvantages of the simpler systems as regards the night errors and in addition possesses some peculiarities of its own in its calibration and operation.

In attempting to obtain directional reception on an airplane, the noise of the motors makes it practically impossible to employ the method of minimum signal. This limitation has led to the development of a system in which a signal is heard at all times, the directional effects being observed as an increase or decrease in the intensity of this signal. To obtain this result, two loops are employed, a small one and a large one. The small loop is mounted along the center line of the airplane and provides sufficient reception to give a moderately good signal, whenever the plane is flying toward or away from the transmitting station. The large loop is mounted at right angles to the first,—that is, in the line of the wings,—so it is therefore in a position of minimum signal whenever the plane flies toward or away from the transmitter. This large loop will, however, pick up a very strong signal just as soon as the plane has changed its course a slight amount. By arranging the connections of the large loop through a quick-acting switch, so that it may be cut into the circuit of the small loop and then be quickly reversed, means are provided for determining when the large loop is just at right angles to the line connecting the plane and the transmitting station.

With the large loop connected in one direction, and with the plane a little off the course, the signals will be made stronger than those obtained by means of the small loop alone; upon throwing the switch the other way, the signals are made weaker. The plane is then steered so that when the switch is moved rapidly back and forth no change in the strength of the received signals is noted. This condition then indicates that the plane is flying directly toward or away from the transmitting station. The elementary circuits of the two-loop system are indicated in Fig. 5.

The directional transmitting equipment, the great radio "beacons" which supply the signals that the loops pick up, will be described in detail in future articles. These "lightless lighthouses," as they have been called, are a vitally important aid to navigators at sea and in the air. A knowledge of their essentials is of interest to everyone who travels, or expects to travel, in steamers or airplanes.

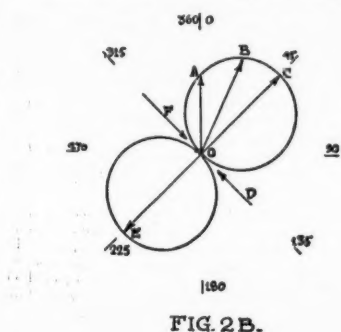


FIG. 2B.

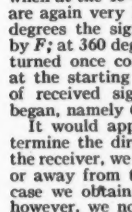


FIG. 1A.

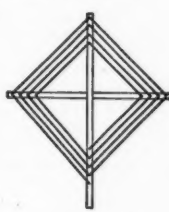


FIG. 1B.

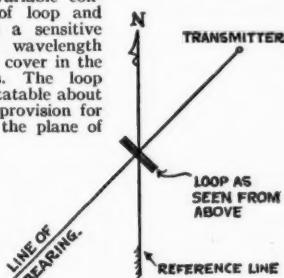


FIG. 2A.

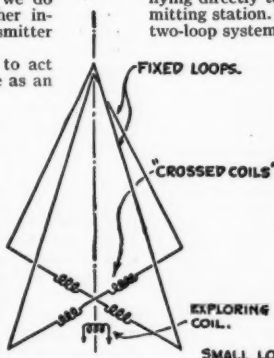


FIG. 4. BELLINI-TOSI SYSTEM.

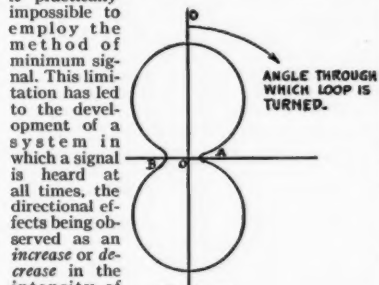


FIG. 3.

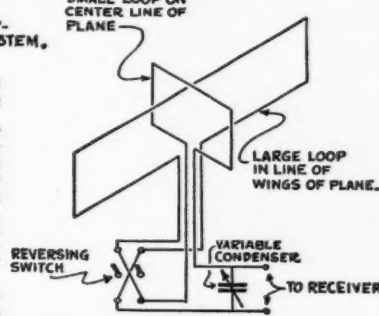
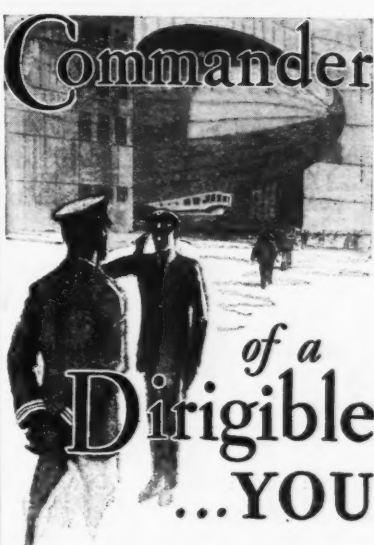


FIG. 5. ROBINSON SYSTEM.

the effect of rotation of the loops obtained by means of small "exploring coil" which may be rotated within a pair of "crossed coils" to which the large loops are connected. As the loops are fixed in position, much larger loops may be used, so that the strength of signals received on such a system is generally greater than on the simple small loops considered above. The principles of this arrangement are sketched in Fig. 4.



A HUGE rigid airship being walked from its hangar. You in command. Would you like that more than anything else in the world? If you would, one thing you'll need is perfect health, and good health requires good teeth.

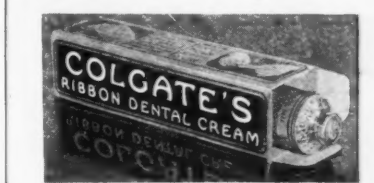
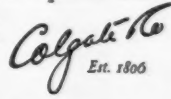
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HOW'S *your* TENNIS?

NOT long ago, a friend of mine went to see Helen Wills in California. Never having met our famous champion, of course she wondered what Helen Wills was like. She found her a lovely, unassuming girl, simply and attractively dressed and chiefly interested in two things—tennis and her own art work. Had you heard that Helen likes to draw and is specializing in it in her course at the University of California? In fact, that is how we happen to have one of her drawings on our page this month, done by her especially for the G. Y. C.

When my friend and Helen talked of tennis that day in Helen's home, it was not about her own playing and many triumphs that she wished to speak. It was of tennis itself, and of the girls who like to play it. Helen Wills believes, she told my friend, that any girl who is well and strong and interested in tennis can become a good player—perhaps not a brilliant player, nor even an unusual one, but a good player.

"Do you think every girl should try to become a champion?" my friend asked her.

"Why bother about that?" Helen Wills replied quickly. "If a girl enjoys playing and is doing her best in the game, why worry over championships? If she has it in her to become a champion, she will. The important thing is to enjoy playing—and to play your best."

"How can a girl learn to play her best?"

Helen Wills on the tennis-court—a picture drawn by Miss Wills especially for the G. Y. C.



my friend next asked. She is a very practical person.

Helen Wills did not hesitate. "By making up her mind to do it, by learning in what good tennis consists, and by being willing to practice until she can put that good tennis into her own game," replied our National Champion.

She went on to say that she herself has always gotten a great deal of help by watching good players, especially in matches. When she was learning, she never missed an opportunity to sit beside a court in order to observe just how the various players of her tennis club handled this stroke and that. She talked with them afterward, asking them to show her slowly just what they had done. When she could, she had them watch her own playing, criticizing her strokes. In fact, she told my friend, there is no one to whom she owes more today than to her father and her friends who so constantly played with her in her beginning days and who analyzed her game for her.

Always Something to Learn

Just the other day, someone gave me Suzanne Lenglen's book "Lawn Tennis." Running through its pages, I saw this: "Remember that, however good or magnificent a player you may become, there will always be something for you to learn. Watch better players intently. Never be afraid to

ask how such and such a thing is done and why." I at once thought of what my friend had told me of her conversation with Helen Wills. Did these two famous girl players agree on other points about their game, I wondered? I looked up Helen Wills' own book, "Tennis," and found that they do.

Both have valuable suggestions that are astonishingly similar for the girl who wishes to improve her game. One of the first things to consider, they say, is your racquet and your grip. Helen advises against a racquet that is too heavy—one weighing thirteen and a quarter or thirteen and a half ounces being best for the average girl, to her mind. Suzanne mentions the handle. "What is essential is an easy grasp with the racquet handle," she says; "familiarity and comfort with it." And Helen, "Grasp the handle easily and naturally, holding it near the end, so that the leather of the handle rests comfortably in the lower part of your palm."

Both Helen and Suzanne urge every girl to study her own game closely. Find out your good points and your weak ones, then work to overcome the weak ones. "Set yourself to practice the hard shot for, say, twenty minutes before you play," Helen suggests. "Find a friend who will work with you, returning your balls and at the same time working on her weak stroke. If such a friend is not available, do it alone."

Suzanne also mentions the possibility of working by yourself on your tennis form and the strokes which you especially wish to perfect. "In many little ways," she says, "when you go about your ordinary daily movements, even when getting up and going to bed, you can foster quickness of action inspired by celerity of thought. The tennis ball travels too rapidly to be dealt with by slow methods." And she goes on to suggest that you try your strokes before a long mirror, if possible, so that you may see just what you do in swinging your racquet, and whether you really are moving as you think you are. Sometimes there is a difference!

Aim for Freedom

How is your forehand stroke? Helen and Suzanne consider it the groundwork of all tennis. "Remember that the essence of the forehand stroke is to be able to bring the face of the racquet flat against the ball," Suzanne says, "which should be struck in the center of the gut strings. You will never be able to accomplish this if your grip on your racquet brings its face, when swung, up, or if it bears down. Your elbow should not be angled. This occasions discomfort and lessens the power you can give to the ball. Your aim should be for freedom, which is best obtained by addressing the ball well away from your body. To have your elbow digging into your sides is always to risk the loss of power and direction."

But there are other points in tennis besides your racquet, your grip and your strokes. There is the way you play the game; there are your ideals of good sportsmanship. "All tennis isn't seen on the court," Helen declares, mentioning, as special enemies of good tennis, impatience and irritation with yourself over your poor shots. Her special praise is for Molla Mallory, who has many a time come up from behind, with a score against her which would have discouraged almost any other player, and has conquered her opponent. Courage and determination like hers count in tennis. A calm and serene attitude while playing, respect for your opponent and for all the ideals of sportsmanship—these will help you just as much as perfecting your strokes.

If you are interested in Helen's and Suzanne's further suggestions, read their books for yourself. Helen's is published by Scribner's, Suzanne's by Dodd, Mead & Co.

HELEN FERRIS

Keep Summer's Loveliness

By BERTHA CHAPMAN CADY of the American Museum of Natural History

THESE are days when everyone wishes she could keep with her forever the loveliness of summer, the beauty we see when we go off by ourselves to some hill-top, looking and listening. That is why so many girls enjoy making outdoor memory books.

There are many kinds of outdoor memory books, but it seems to me none is lovelier than a book of your own blue prints—prints of the ferns and wild flowers and leaves and grasses around you now.

The materials needed for the making of blue prints are simple and inexpensive. Any photographer will be glad to give you several of his old glass plates. Select two of equal size and clean and bind the edges with adhesive tape to prevent breaking and cutting. Also have on hand some rubber



bands sufficiently long to hold these plates in place.

In selecting the flowers or ferns or grasses which you wish to have in your book, remember that it will be more attractive if the specimens appear in it as they do when growing. Therefore, do not pick a single blossom; pick a spray, with a leaf or two, if that is the way the flower grows. Do not try to crowd too much into your print, however. Think of it as a picture. The cluttered picture never has the charm of the more simple one.

My friends the Girl Scouts often ask me just how to put the glass and the blue-print paper together to make the print. It is not difficult if you think of it in layers. For the first layer, place one piece of glass upon the table; next, your piece of blue-print paper, printing side up; next, your flower or whatever you plan to print. Be sure that all moisture is removed from your flower or leaf, as moisture stains the print. Last of all, place the second sheet of glass upon the specimen.

To hold it all in place for the actual printing, use the rubber bands, one at each end. Spring clothespins are also useful for this purpose. Before you put the rubber bands around the glass, however, stop to consider whether this pressure will bring out moisture from your flower or whatever you are printing. If you think that it will, I suggest that you do your printing from a table or any level surface, in the sun. In this way, all you need do is to place the glass frame in the sun, removing it when the print is completed.

Expose the glass to the sun until the print itself is a deep lavender. The length of time for this exposure depends on the locality in which you live. Conditions in various parts of the country differ. Days themselves differ in the intensity of light. Experience will teach you how to obtain the best results. In most instances, the printing itself is a matter of but a few seconds. Next, take your print from your frame and wash it thoroughly in clear water. Use running water if possible, as the chemical must be entirely removed. Pin your print to a board or table, out of the sun, to dry. When it is dry, color it with water colors or crayons, trying to make your colors as true to nature as you can.



Our Summer Roll of Honor

A publication prize in cash has been awarded to each G. Y. C. Active Member whose picture you see on this page



Janet Thompson

SO many splendid achievements have been arriving from our G. Y. C. Active Members that we have decided to publish a Summer Honor Roll this month, with just as many pictures of our Honor Girls as we can possibly get on.

Janet Thompson is a G. Y. C. Active Member in Maplewood, N. J. Janet is especially interested in sewing. The achievement by which she won Active Membership in the G. Y. C. and the right to wear our blue and gold pin was that of making a dress. The material which Janet chose was white percale with tiny pink rosebuds in the design of the cloth. For her collar and cuffs she used pink broadcloth to match. And when she had finished her dress, her friends agreed that it was one of the most becoming she had ever had. How do you like our G. Y. C. "For the Girl of Charm" page, Janet? And have you tried making some of the dresses Elizabeth Lee has described there? I hope so!

Clementine Newman lives in Madison, Fla. Is it any wonder, what with the lovely Florida sunshine, that she enjoys taking pictures? Clementine is a very Active G. Y. C. Member, and one of her most recent achievements was that of learning how to develop her own snapshots. Do you like to take pictures, too? And have you studied it so that you take not only clear ones but artistic ones as well? A friend of mine enjoyed taking pictures when she was in high school, studying the ways by which she could take better pictures, and today she is a famous photographer. That is another reason why we have G. Y. C. achievements—to help you to discover the things you like to do and can do well. For those very things may be what will help you to decide what you wish to do after you have completed your general studies at school.

And how I should like to go along with you on your hikes this summer! I should like to be with those of you who take bird hikes, to see how many different kinds of birds you can identify. I should like to be with you on your wild-flower hikes. And I do wish I could have been along with Evelyn Pelletier and her best friends when they took their old Indian-trail hike. Have you an old Indian trail or a Pioneer's trail near you where you can hike? This picture of Evelyn and her friends was taken the day they climbed Mt. Watatic, by way of an

Indian trail. They also visited a government fire ranger's station, and there the ranger explained his work to them.

Frances Mattison is one of our Active Members in India. She sent this picture from Cawnpore, India, together with a description of a pageant which she wrote and directed and in which she appeared in this costume. The pageant was called "Pageant of the Hours," and for her achievement in it Frances was awarded our Active Membership.

Betty Geffine doesn't live in the Orient, but that did not keep her from planning and giving a delightful Japanese party for her friends. To be a charming hostess is indeed a successful G. Y. C. achievement, and I am happy to recognize Betty's work here.

Another G. Y. C. Active Member has accomplished a most worth-while achievement. She is Mary Funk of Columbus, Ohio. Mary has been awarded the national emblem of Life Saving by the American Red Cross. We are very proud of this and hope that many more of you will be wearing the Life Saving emblem before the summer is over. To earn it is not easy—but you can never know when another's life will depend on your efforts. These are some of the ways by which Mary won her emblem: She swam a hundred yards, using three strokes. She carried a person of her own weight ten yards by the head carry, the cross-chest carry and the tired-swimmer's carry. She broke three grips under water, turning after the breaks, bringing the person to the surface and starting ashore. She demonstrated artificial respiration and met other official requirements of the Red Cross. Congratulations, Mary. And if others of you earn this emblem this summer, do write me and send me a snapshot of yourself wearing your emblem. I want to know all your faces.

This, then, is our Summer Honor Roll. Next month we shall have letters from our Members and a special announcement of importance. Watch for it! Meanwhile for those girls who have joined our girls of The Youth's Companion during the past month I am putting below this a little explanation of just what the G. Y. C. is.

Hazel Grey

Executive Secretary of the G. Y. C.

What the G. Y. C. Is

G. Y. C. means "Girls of The Youth's Companion." The G. Y. C., which is a club for girls everywhere, was started because The Youth's Companion wished to give recognition to every girl who does something worth while. To become a Corresponding Member, all you need do is fill out the coupon here and send it to Hazel Grey, the Executive Secretary. This enrolls you among the girls who are doing things. The rest depends upon yourself; for the next step, Active Membership and the right to wear our blue and gold Keystone Pin, is taken when you have sent in a record of achievement which in the opinion of the Executive Committee makes you worthy of Active Membership. The blue and gold pin is then sent to you and you become eligible for the publication prizes, the Treasure Chest awards and Contributing Membership, the highest honor of all. Any girl may be a Member of the G. Y. C., whether or not she is a Camp Fire Girl, a Girl Scout, a member of a 4-H Club or other organization.

RETURN TO HAZEL GREY

The G. Y. C., 8 Arlington Street,
Boston

DEAR HAZEL GREY:

I am a girl who enjoys what the G. Y. C. Members do, and I am interested in worth-while achievements.

Will you please write and tell me how I may join the G. Y. C., earn the right to wear the blue and gold Keystone membership pin, and enjoy all the advantages of being an Active Member?

My name is

My age is

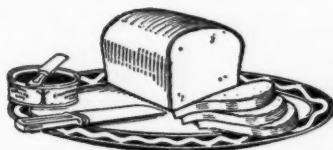
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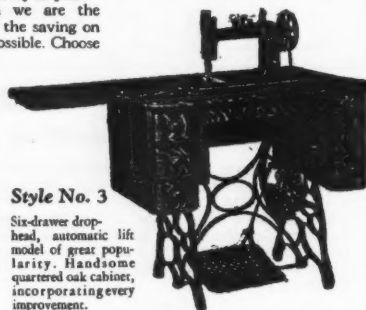
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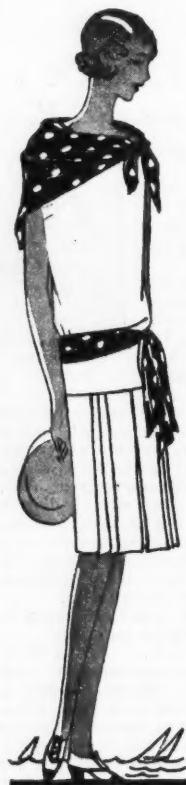
FOR the GIRL of CHARM

FASHIONS ESPECIALLY SELECTED FOR THE G. Y. C.

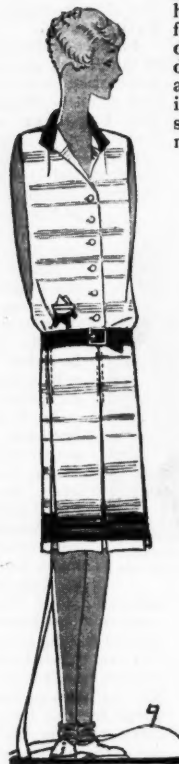
Which is You?

THIS month I have four girls for you, with four different kinds of coloring, each of whom is wearing her favorite summer dress—Betty, who has Titian hair; Judy, who is small and blond; Genevieve, who is tall and dark; and Sally, who, so she says, is "medium everything." Which are you most like? If you are like Judy, I am sure a dress such as hers will look well on you. If you have hair like Betty's, the honey color of her frock will be a charming contrast to the reddish tones of your hair. But Sally's firecracker dress will be becoming to you, too, if you are like Judy. Change them about in your imagination. Each of the dresses, as you will see, is made from one of the attractive new materials.

ELIZABETH LEE



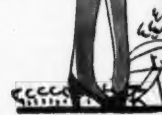
Betty



Judy



Genevieve



Sally

Betty

Betty's hair is Titian color, even though her brother does call it red, and she is of average height. Her favorite dress this summer is a slip-over one for general use, with a two-piece effect in front, made of honey-colored silk, combined with a scarf and scarf belt of printed silk in navy blue with honey-colored polka dots.

Judy

Judy is small and a blonde. Her favorite dress just at present is for sports and is made of bordered tub silk, white with fine black vertical lines, and rose at the bottom of the skirt and at the collar. Judy had great fun appliquéing on the saucy little black dog which you will see at the pocket if you will look closely.

Genevieve

Genevieve is tall and dark and very fond of bright colors. That is why she chose as her favorite this flowered chiffon dress of yellow-green—*chartreuse* the color is called. She likes the cape back and the flounces of the dress, and the design of the chiffon, which is fruit of every description in brightest colors, oranges, plums, cherries and grapes.

Sally

Sally is medium—medium brown hair, medium height—and she doesn't mind, she says, because so many colors are becoming to her. She likes her smocked dress because she did the smocking herself. It is made of firecracker red crêpe de Chine, with the smocking in black and white. And it has a red suede belt, a very stylish touch.

THIS G. Y. C. Fashion Page is for the girl who wishes to look her best. It is for the girl who knows that one of the first secrets of a charming appearance is care in the selection of her clothes. It is for the girl who knows that the colors she wears are important, as is the design of her dress, itself. And it is for the girl who is clever with her needle. In order that those of you who enjoy sewing may make the dresses which you see here, if you wish, The Youth's Companion has entered into a special arrangement with the Butterick Company so that you may secure the patterns for them. Buy your patterns from the nearest pattern store, or directly from the Butterick Publishing Company, 223 Spring Street, New York City, asking for the following numbers. Betty's dress may be made from pattern No. 2014, costing 45 cents, Judy's from pattern No. 1986, costing 45 cents, while her dog transfer pattern is No. 226, costing 25 cents. Genevieve's fruity dress is pattern No. 2044, costing 50 cents, while Sally's is No. 2027, costing 45 cents.

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for your lunch party

Here is a recipe you will like because you're sure to get a fine batch of cookies when they are raised with Rumford:

$\frac{1}{2}$ cup butter
1 cup sugar
2 eggs
2 cups flour
2 teaspoons Rumford Baking Powder

$\frac{1}{2}$ teaspoon salt
1 tablespoon milk
1 teaspoon lemon or vanilla or orange rind

Cream butter and sugar. Add well-beaten eggs. Sift flour, baking powder and salt together and add to mixture. Add milk and flavoring. If dough is not stiff enough to roll, add more flour. Turn out on floured board and roll thin. Cut in fancy shapes and bake in moderate oven.

Rumford leavens evenly and makes fine-textured cookies, cakes, biscuits, muffins, etc. It is a wonderful help, especially to beginners, to use a baking powder that is so absolutely dependable.

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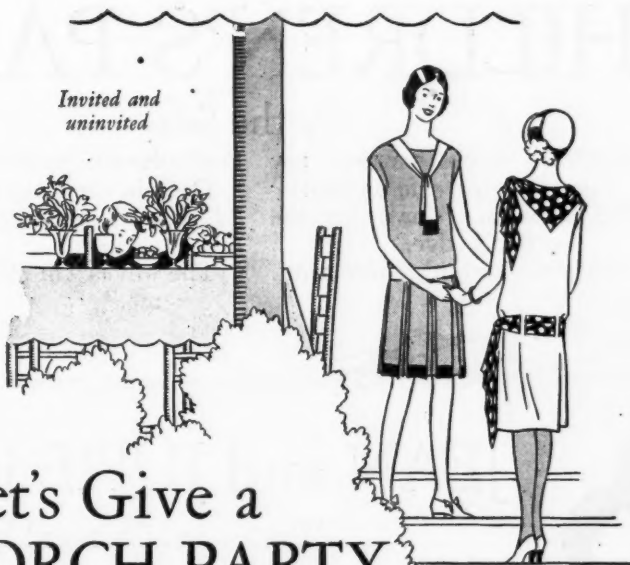
this letter—one of many that we shall print from month to month:

BARTON, DURSTINE & OSBORN, INC.
383 Madison Avenue, New York
May 23, 1928

Dear Miss Ferris:

Your report on Minute Jelly is priceless. It does seem to me that the only way to get a complete picture of a product from the point of view of the public is exactly the way you have done it. I am infinitely obliged.

(Signed) ELMER BROWN MASON



Let's Give a PORCH PARTY

With Specially Tested G. Y. C. Recipes

SUMMER—and porch parties! Of course. So I am passing on to you this month a number of your own recipes for your summer entertaining. Have you an emergency shelf, I wonder? Often the parties that are the most fun are the unexpected ones. For your unexpected parties, I suggest that you have on hand: bottles of ginger ale and charged water, maraschino cherries, several oranges and lemons, left-over juice from canned fruits, and chocolate syrup for milk shakes. When you serve tea for the family, make an extra amount and put it in the ice box. Cold tea, not more than a day old, is an excellent addition to many fruit punches.

Remember that fruit beverages, like ice cream, are better if they stand two or three hours before serving. However, charged beverages, such as ginger ale, are not to be opened until just before you use them. Think of your iced drink's good looks and remember the garnishes: mint leaves, cherries, lemon slices, pieces of fruit, fresh berries, skinned grapes and slices of banana.

And don't forget your family! Serve your favorite iced drinks to them as well as to your friends. The family to whom a fruit iced drink is served almost daily during the summer will be certain of having its daily quota of the vitamins and minerals we all need. (And if you don't know what a vitamin is, find out!) Then, too, fruit drinks help us to keep up our record of the six glasses of water a day which the doctors tell us we need for our own good looks.

Now about your cake-making. Always use a reliable recipe. (Those published here have been thoroughly tested.) Use good materials. See that all your measurements are exact and level. Sift your flour before measuring. If you can, use an oven thermometer. Portable thermometers which can be used in any kind of oven may now be obtained. Be sure that your pans are thoroughly greased to prevent sticking. It is usually a help to line your pans with wax paper before greasing.

For a porch party, cakes that are easily served and eaten are most appropriate. For this reason, I suggest that you bake the "Brown Treasure" in individual cake tins or muffin pans, as is also suggested with the "Poor Man's Cake." You may also use square or rectangular cake tins, cutting your completed cake into diamond-shaped pieces as an added dainty touch. For dainty serving is one of the truest signs of a gracious summer hostess.

BROWN TREASURE

A recipe passed along by an old Bohemian woman. From Elizabeth Elser of State College, N. M.

2 cups flour, measured after sifting twice
1 teaspoon baking powder
 $\frac{1}{2}$ teaspoon salt
 $\frac{1}{4}$ cup shortening
 $1\frac{1}{2}$ cups sugar

1 cup cold coffee or milk
1 teaspoon baking soda
1 teaspoon vinegar
3 eggs
1 teaspoon vanilla
 $\frac{1}{2}$ cup brown sugar, sifted
 $\frac{1}{4}$ cup ground chocolate or cocoa

Sift flour, baking powder and salt together. Work cold shortening into flour, first with knife, then with the finger tips. Sift in one and a

By ALICE BRADLEY, Principal of Miss Farmer's School of Cookery

half cups sugar and a half-cup ground bitter chocolate or cocoa with flour sifter. Mix well. Stir in one cup cold coffee in which one teaspoon soda has been

dissolved. Add vinegar and beat thoroughly. Beat eggs and add to first mixture with vanilla. Just as good results are obtained when eggs are beaten together as when yolks and whites are separated. Have well-greased iron muffin tins heating in oven. Fill half full, sprinkle brown sugar over top of each and bake in a hot oven or at 450° F. for ten minutes. They should be dark brown with a golden crust for frosting. The little holes present are caused by the melting of the brown sugar. If the mixed dry ingredients and shortening are stored in a cool place in glass jar, they can be made into an emergency cake at a few minutes' notice by adding the liquid ingredients. This mixture makes twenty large cup cakes.

GRAPE JUICE

From Jessie Craig of Cordova, Ill.

1 cup grapes
 $\frac{1}{2}$ cup sugar
Boiling water

Sterilize quart jar and rubber in boiling water. Pick grapes from stems and put in jar with sugar. Fill jar to top with boiling water. Seal tightly. When ready to use, strain juice. May be used after it has been canned a month, but it is better after three months.

POOR MAN'S CAKE

A recipe used by her grandmother. From Rebecca Croll of Jenkintown, Pa.

1 cup brown sugar
2 cups seeded raisins
1 cup water
 $\frac{1}{2}$ cup lard
1 teaspoon cinnamon
 $\frac{1}{2}$ teaspoon baking powder

Put brown sugar, seeded raisins, water and lard into a saucepan, add spices and put on stove. When mixture begins to boil let simmer for a few minutes. Remove pan from fire and let contents cool. When cold add baking soda dissolved in one tablespoon hot water and flour sifted with baking powder and salt. Mix well and pour batter into a medium-sized greased cake pan and bake in a moderate oven or at 350° F. for forty-five minutes. This recipe will serve twelve people.

PINEAPPLE SMASH

From Lorene Shisler of Cleveland, Ohio

3 cups water
1 cup sugar
1 can crushed pineapple
Juice 2 lemons
Juice 1 orange
1 pint soda water

Put sugar and two cups water in saucepan, stir until sugar is dissolved, bring to boiling point and boil five minutes. Add crushed pineapple and fruit juices. To one cup of this mixture add one cup water and freeze until firm. Chill remainder and just before serving strain into serving pitcher. Add soda water and serve in tall goblets with a spoonful of the frozen mixture. Garnish with mint.

FRUIT PUNCH

An original recipe from Elizabeth Quattlebaum of Asheville, N. C.

2 oranges
1 grapefruit
1 small jar red cherries
Juice 2 lemons
1 pint grape juice
 $1\frac{1}{2}$ cups sugar
2 quarts water

Cut fruit in pieces and put in punch bowl with the lemon juice and grape juice. Put sugar and one pint water in saucepan, stir until sugar is dissolved and heat slowly. Pour over fruit and add remainder of the two quarts of water. Add ice. This recipe will serve twelve people.

Good News, Ye Outdoor Cooks!



Do you like to hike and camp? Then this is good news for you. The G. Y. C. has a book of outdoor cooking recipes waiting for you, sent to us through the courtesy of the Kellogg Company. I shall be delighted to send you one, free of charge, if with your request you will inclose a two-cent stamp. But—first come, first served, as I have only a limited number.

HAZEL GREY



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THE CHILDREN'S PAGES

By the Sea

Polly has tucked her dress up; She's planning to go wading
Her shoes are safe on land; Deep in the salty sea.
She's running down to the "I think," she says, "if I ask
ocean's edge, them to,
Over the smooth white sand. The waves will play tag with
me."



The good cat Jupie looked down into the hole



JEAN and JUPIE in the Woods

Written and illustrated by Neely McCoy

JEAN, why don't we take our supper and have a picnic?" said the good cat Jupie to his little friend Jean, who lived with him in the little red house with the garden.

"Oh, that's a fine idea!" Jean replied.

So they went into the house and packed their supper in a little basket, and after they had closed the door they told Apple Tree where they were going.

"All right, my dears," she said. "But don't get lost."

So they started off. And pretty soon they came to a nice sunny rock, and, sitting there, half asleep as usual, was Ground Hog.

"Where are you two going?" he said, yawning.

"Just for a little picnic," said Jupie.

"Don't you want to come along?"

"I might," said Ground Hog. "And then again I mightn't. How far are you going?"

"We don't know," said Jean.

"I don't think it's very sensible," Ground Hog said, "to start some place if you don't know how far it's going to be. It might turn out to be a long way. Then you would be in a nice fix! Why can't you just stand *here* and look around you?"

"That wouldn't do," said Jupie, "because in a very short time you'd see everything there was to see, and then you would have to go some place else."

"Not if you didn't want to," said Ground Hog. "I guess I'll stay here."

"Well, good-by," said Jupie and Jean, starting on again.

"I never saw such a lazy animal," said Jean.

"He certainly is lazy," Jupie replied. "But then, nobody seems to mind, so I guess it's all right."

Pretty soon they came to some woods. "Shall we go in?" said Jean. "Or do you think it's time for supper?"

"Well," said Jupie, "it is getting pretty late, but let's go in a little way and see if we can find some jack-in-the-pulpits."

It was pretty dark in the woods, and the dead leaves made a rusty noise under their feet as they walked. Jupie loved it and went scurrying round and round. Then he would look back to see if Jean didn't think he was a very clever cat. Once he chased around a big tree. But when he turned around to look at Jean *she wasn't there at all!*

At first he couldn't believe his eyes. Then he thought she was playing hide-and-seek with him, and he started to creep back to find her. Just then he heard her

calling. Her voice sounded very scared and strange, as though she were quite far away.

"Where are you, Jean?" he called back.

"Here!" said Jean's voice; but it sounded as though she were away down in the ground beneath him. He looked and looked, and at last he found a large hole, right where Jean had been when he last saw her. He looked down into the hole, and it was so deep that it was almost dark at the bottom. But away below him he could see Jean, looking up.

"What in the world has happened?" said Jupie. "How did you ever get down there?"

"I fell down," said Jean. "It's an old well, I guess. There were branches and leaves over it, so that it didn't look like a hole at all. But when I stepped on it, I just went through."

"Is there any water down there?" asked Jupie.

"Not very much," said Jean, "but it's cold and dark, and I don't like it at all."

"Can't you climb out?" called Jupie.

Jean tried, but the sides of the well were all made of smooth stones, and when she had climbed a little way she couldn't get any higher. Then she began to cry.

"Oh, what *can* I do?" said Jupie, and he started to call for help. He called and he called and he called—but there wasn't any answer. And he felt so very badly about Jean's crying that before she could

say a word he had jumped right down into the well.

"O Jupie," said Jean, hugging him. "What a thing to do! Now we'll both have to stay here forever, and nobody will ever know what happened to us."

"I don't care," said Jupie. "I wasn't going to be up there without you."

And they both sat down on the bottom of the well and cried and cried.

Meanwhile, when it started to grow dark Apple Tree got more and more worried. "O dear," she said to herself, "if they don't come home soon, I just don't think I can stand it!" And she got so nervous that she shook a lot of her lovely pink blossoms all over the ground.

"Well!" said a little voice. "It looks as though it had been snowing around here!"

Apple Tree looked down, and there was Squirrel! "O Squirrel!" said Apple Tree.

"Jean and Jupie are lost!"

"Lost?" said Squirrel. "What makes you think so?"

"Look how dark it is," said Apple Tree. "They *never* stay out this late. I wish you could see in the dark, Squirrel, like Jupie. Then maybe you could find them."

With this, Squirrel gave a little squeak of joy. "Hurray!" he cried. "Owl can see in the dark. I'll get him."

So he hurried off, and pretty soon Apple Tree saw Owl flying very low over the fields. After a while she saw him rise in the air as if he were listening to something. Then he flew right over into the woods. He was gone a long time and then he came flying straight to Apple Tree.

"I've found them!" he cried.

"They're in an old well. I'm going to get a rope out of the woodshed."

"Mercy!" said Apple Tree.

"Aren't they drowned?"

"No!" called back Owl, flying off with the rope dangling from his beak.

Jupie and Jean couldn't see how Owl was going to get them out with the rope, and they were sitting talking about it, while they waited for him to come back, when they heard Squirrel's little voice.

"Where are you, Squirrel?" called Jupie.

"I don't know," Squirrel yelled back. "Where are *you*?"

"We're in here," said Jupie.

"Keep on talking, and I'll follow the sound of your voices," replied Squirrel.

In a minute Squirrel called: "Here's Owl. You just leave everything to him, because he's a wise old bird; and if he says he can do a thing, he usually does it."

Jean and the good cat Jupie at home



Owl took one end of the rope and dropped it down the well while he kept hold of the other end. "You hold on to that end, Jean," he called; "but don't pull yet."

Then he took the other end and pulled it around a tree and threw it down the well. "There!" he said. "Now hold on to both ends at once and just climb right out."

"What shall I do?" said Jupie. "I can climb up a tree, but I can't climb up a rope."

"You sit on my shoulder," Jean said, "and put your paws around my neck, tight!"

Squirrel was so excited that he almost fell in, watching them. The first time Jean tried, she couldn't get up, but Owl told her to put her toes in the little cracks between the rocks.

"It's so dark I can't see," she said.

"I can see," said Jupie, "and I'll tell you where the cracks are."

So Jupie jumped up on Jean's shoulder and peeked down where her feet were. "I see a crack right where your left foot is," he said. And, sure enough, Jean poked her foot into the crack and stepped up.

Then Jupie peeked down again. "I see another! I see another!" he said. "Just above your other foot." And Jean felt for that crack and put her foot in it and stepped up a little bit farther.

So little by little they went up and up and up until they finally scrambled out of the well.


Of course when they reached home they had to tell Apple Tree about it,—about the hole and Squirrel and Owl,—and by that time it was so late that Squirrel and Owl were invited to stay in the little red house all that night.

And they did.

If you wish to read about more of Jupie and Jean's adventures you will find them in their own book called, "Jupie Follows His Tale," written by Neely McCoy and published by the Macmillan Company.



They finally scrambled out of the well



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Every family should have one or more pets. In establishing this column, it is our desire to assist our subscribers in the selection of these pets by publishing the advertisements of reliable persons, who have them for sale.

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The Magic Merry-Go-Round



Uncle Jim's picture of the village and stockade

Uncle Jim's Indian Hike

By Fay Welch

IT all happened one day when Betty and Jimmy's Uncle Jim was visiting them. "How about that Indian hike today?" Uncle Jim had said at breakfast.

"Yes!" shouted Jimmy. "Yes!" shouted Betty. And right after breakfast they had run over to invite Polly and Jeanne.

And that is why the five of them were all walking in the woods that sunny morning.

"Shhh!" said Uncle Jim suddenly. "We're Indian hunters now." And he crouched over a little and sneaked forward very, very quietly, putting his toes down carefully and not stepping on his heels at all. Jimmy crouched over, too, and so did Betty and Polly and Jeanne. And Jimmy walked on his toes carefully, not stepping on his heels at all. And Betty and Polly and Jeanne did, too. Finally they came to a little open glade on the bank of the creek.

"I'll bet the Indians would have liked to camp here," said Jimmy.

"Would they've made a tepee like the one you said we would make some time?" asked Betty.

Uncle Jim shook his head. "No, not a tepee in this part of the country, Betty, because, you see, the Indians who lived in this state, near Lake Ontario, built what they called Long Houses."

"Let's make a Long House then," said Jimmy.

"All right," said Uncle Jim, looking round. "The first thing to do is to find some twigs a little bit larger round than my lead pencil here—then some pieces of thin bark."

In a few minutes, Betty and Polly and Jeanne and Jimmy were back with the twigs and the bark; and meanwhile Uncle Jim had found some twigs that were forked, like those in the picture. Four of these he broke off to make them exactly the same length. "These are going to be the corners of our Long House,"



Framework for the Long House

he told them. And two of the twigs he made a little longer than the four. "These will make the peak of the roof," he said. Then he stuck them all in the ground, making the frame of the Long House.

"Now," went on Uncle Jim, "we'll put up more twigs at the side, the same length as the corner ones. And we'll put some across the roof. And then we'll be ready to put on our bark."

So Betty and Polly and the rest put up the side twigs and laid on the roof twigs. Then, very carefully, they put on the pieces of bark, and after that some more sticks on the outside to hold up the side walls and help keep the roof in place. But they left a place for a door at one end, and they left a hole which Uncle Jim said was an Indian chimney.

"Let's make a whole Indian village," said Betty.

"All right," said Uncle Jim. And, do you know, it wasn't long before they had one, there on the bank above the creek. Then Uncle Jim had another idea. "The Indians always had a Council House," he told them; "you know, large enough for them to meet together and talk things over."

So they made a Council House, just like the others, only much larger and with three chimney holes. And they put a stockade round their village, by sticking twigs into the ground, side by side. And if you want to see exactly how their Indian village and their Long Houses looked, the picture at the top of the page is one Uncle Jim drew of it.

"But when are we going to make our tepees, Uncle Jim?" Betty asked.

"Why, the day we make our Brown Paper Indians, of course."

The Merry-Go-Round Man says to tell you he hopes you will build a Long House, too. And he says we are going to have the story of Betty and Jimmy's Brown Paper Indians right here in our magazine very soon.

NUTS TO CRACK

THE BEST PUZZLES OF THE MONTH

1. LETTER-CHANGING

The FORT on the hill guarded the *** and the lower *** of the city. In times *** even during the *** century, the garrison was maintained *** foremen from the *** should *** the pirates in the *** of arms and drive them from their snug *** to join the *** of their scattered bands. Decay *** were the only forces that could finally *** the defenders. Their far-famed bulwarks have now crumbled into DUST.

In this word-changing story, a change of one letter in each missing word will give the next word. Start with FORT and end with DUST.

2. MISSING HOMONYMS

A young Yankee named *** Who resided in *** Met a Scotchman from *** On the banks of the *** Said the Yankee, "I'm *** To a million, but *** I receive it on *** I am living for ***"

Can you supply the missing words to complete the poem?

3. CATCHY SPELLING

How can the word ENEMY be best indicated by three letters? See if you can perform this feat of spelling, but be sure you get the best answer.

4. CHARADE

At first you may not think my first, But my second's never high. And two cannot perform my whole, However hard they try.

5. DOUBLE WORD-SQUARE

Large Square: 1. A performer. 2. An illegal deed. 3. Exhausted. 4. A symbol of finality. 5. Part of a fortification. Small Square: 1. Border. 2. Cholera. 3. A feminine nickname.

6. COLONEL PUZZLER

Our old friend Colonel Puzzler has gone in for aviation. He was directly over one regiment, which was marching north at four miles an hour, while one hundred miles north there was another regiment marching south at six miles an hour. The Colonel flew north until

he reached the second body, then turned and flew south until he reached the first, and continued flying back and forth until the two regiments met. If his speed was 100 miles an hour, how far did he go?

This puzzle may seem very perplexing, yet the answer may be obtained in a very simple manner.

7. WORD-DIAMOND

1. A letter. 2. A vehicle. 3. Expectation. 4. A company of travelers. 5. Worthless dependents. 6. Made over. 7. Certain fruits. 8. A masculine nickname. 9. A letter.

8. SYNONYMS

There is a word used frequently in conversations. Change its last letter to another letter, and the meaning will remain the same. Rearrange the letters of the new word, and the third word still retains the same meaning. These letters are all vowels; change each to another vowel and make a familiar foreign word that still has the same meaning.

9. LETTER-DROPPING

A little object, small but bright. Remove a letter from its right. And you will learn how boxers fight. Remove another to surmise. A place where spring like waters rise. The whole word you must then revise. A letter from its left you take. To find some trees around a lake. Another letter off will make. The name of a long-famous boat. The center of the word you wrote. Amount of value will denote.

ANSWERS TO JULY PUZZLES

1. Pen-Tag-On, Pentagon. 2. Ell, L; Oh, O; Em, M; Eye, I; Bee, B; Gee, G; Jay, J; Zee, Z; Tea, T; Dee, D; Sea, C; Kay, K; Pea, P; Our, R; You, U; V; Queue, Q; Why, Y. 3. To Read Or, Toreador. 4. Wind, Wand, Wane, Lane, Pane, Pale, Gale, Gate. 5. One ought to wait for tea—if one ate nothing before. 6. Iner, Eris, Sire, 7. PEACH, PLUM, APPLE, CH, BERRY, CHERRY. 8. CHOCOLATE; COCOA. 9. M, Map, Mania, Manner, Piece, Are, S. 10. There are men dear to their loved ones, august toward others, and kind in actions.

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STAMPS TO STICK

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Roumania commemorates the tenth anniversary of the regaining of Bessarabia; an Argentine stamp for the first transatlantic air mail, described in May; one of the French debt-fund stamps designed to enable philatelists to lighten the bonded debt of France

GRILLS

THE 3-cent stamp, with a locomotive as the design, of the United States series of 1869 is catalogued at six cents in canceled condition, and at \$1.50 unused, because it has grill on it. The 1875 stamp of the same denomination and design is worth \$25, either used or not canceled, because it is without grill.

This difference in worth—dictated by the presence or absence of grill—would seem to make it essential to the philatelic beginner to know what "grill" means. In those early days our government did not make our stamps; they were printed by a private bank-note company. It was discovered that persons were removing cancellation marks from stamps and reusing the stamps. So the company patented what was commonly known as a "grill roll." When a sheet of stamps was passed under this roll, impressions called "pyramidal bosses" were made on a portion of each stamp. These impressions slightly marred the paper, so that the ink used in canceling penetrated the texture, and it was not possible thereafter to cleanse the stamp.

If you will press a thin sheet of paper against the family nutmeg grater, the paper will receive impressions similar to the "pyramidal bosses" which distinguish some of our country's stamps issued from 1867 to 1869—the grill process having been abandoned with the series of 1870.

In some instances the grill covers the entire stamp; in others, only varying portions of the surface. But these variations determine the stamp's philatelic worth. For example, the 3-cent rose of the 1867-68 set is worth 25 cents if the grill measures 11-by-13 millimeters, but is worth \$25 if the measurement is 11-by-14 millimeters. Thus the importance of knowing something about grills is obvious.

"Grill with points down" means that the stamps were passed under the grill roll with the obverse surface up, the points thus penetrating from front to back. "Grill with points up" means that the sheet went under the roll with the reverse side up, the points then penetrating from back to front.

STAMP NEWS

About Our Commemoratives

WHAT many collectors consider one of the most artistic stamps in our nation's history—the Valley Forge 2-cent red commemorative distributed in May—has been criticized by various persons and religious organizations because of the design selected. Washington is shown kneeling in prayer in the snow, his hat at his side; in the background are great trees, and the commander's horse is tethered at the right. Above and below are the inscriptions "Valley Forge" and "In God We Trust," and the dates 1778 and 1928 appear.

Rupert Hughes, author, one of Washington's recent biographers, is one who has protested, declaring that the story of Washington as reflected by the stamp's design has been discredited by critical historians. Mr. Hughes has been quoted as adding:

"While I was not at Valley Forge with Washington and cannot disprove the fable that, instead of praying decently in his own hut, he went out and shouted aloud in the snowy woodlot, there is no proof that Isaac Potts, who started the fable, was there either."

On the other hand the design is praised by those who have expressed criticism of the militaristic character of some of the other U. S. stamps commemorating events of the Revolution. War scenes were depicted on the Burgoyne and White Plains adhesives, for example, and these offended many collectors both in England and the United States. This situation was called to the attention of Postmaster-General New. On the new Valley Forge stamp the spiritual is accentuated, rather than the militaristic, and this is believed to be pleasing to a majority of philatelists.

The government printed fifty million copies, which is a small supply to meet the demands of the world's collectors!

In Aid of Cancer

THE dates 1858 and 1928 on a new set issued by Sweden,—5, 10, 15, 20 and 25 öre,—together with the inscription "Gustaf V," indicate the significance of the series: the seventieth birthday of Sweden's ruler, on June 16. Each stamp sells at an advance of 5 öre over face, the

extra money to be devoted to a charity. King Gustaf was asked to name the charity, and he decreed that the fund should be used to aid Swedish scientists to combat cancer. These stamps will be withdrawn after December 31.

A Double Commemoration

BULGARIA is issuing stamps which commemorate both the thousandth anniversary of the death of Czar Simeon, under whose rule this Balkan country enjoyed great prosperity, and the fiftieth anniversary of Bulgarian independence.

Philatelic Philanthropy—in France

COLLECTORS throughout the world have contributed many millions of francs toward retiring national-debt bonds in France—and have been doing this by buying unused copies of special "debt fund" stamps, the latest of which is a blue one selling for 10 francs but having a postal value of only 1 franc 50 centimes, the other 8 francs 50 centimes being devoted to the fund. The inscription "Caisse d'Amortissement" indicates the purpose of these adhesives.

—in Portugal

The Netherlands Olympic Games series, illustrated and described in the July Companion, has been supplemented by so-called "commemoratives" in Portugal. Ostensibly these



Mihai, boy-king of Roumania, on the first of a new series; a postage-due from the newest of the stamp-issuing countries—Andorra

newcomers celebrate the holding of the sports, but in reality it is Portugal's scheme to raise money to help defray the expenses of her athletes participating in the competition, as each of the two stamps issued sells at more than its face value. "Portugal-Amsterdam" is inscribed, and the money raised was turned over to the Portuguese Olympic Committee.

—in Madeira

Madeira, one of Portugal's colonies, is similarly plotting against collectors' pocketbooks. Twenty of Portugal's current stamps have been surcharged with two stars and the colony's name, and their use was decreed to be obligatory on mail in Madeira on May 1, June 5, July 5 and December 31, 1928, and January 1, January 31, June 1 and June 5, 1929. The "catch" in this set is that Madeira purposes to build and maintain a colonial museum—and philatelists are being asked to help foot the bill!

Honoring the Builders of the Canal

GENERAL GOETHALS and General Gorgas, whose names are indelibly identified with the building of the Panama Canal, will have their memory philatetically honored in September, when the Canal Zone will issue 1-cent, green, and 2-cent, red, stamps bearing their portraits. These will be the first of a new definitive series.

Air Mail

PRESIDENT COOLIDGE recently signed the bill passed by Congress reducing the air-mail rate from ten to five cents. Postmaster-General New has announced that a new 5-cent air-mail stamp will be issued on August 1. Color and design have not been specified as this is written.

Meanwhile new air-post adhesives are appearing in many countries. Albania surcharged her air-mail set of 1925 with a special inscription to commemorate the opening of a route from Valona to Brindisi. Malta overprinted "Air Mail" on her current 6 pence for use on letters transported to Persia, Arabia and India.

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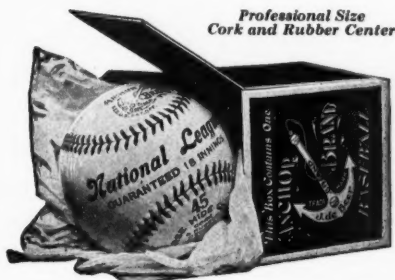
and most worth-while from the standpoint of popularity. You will experience little difficulty in getting subscriptions for six months of The Youth's Companion at \$1.00 each — our special introductory offer for this month only. Each new six-months' subscription entitles you to one of these attractive premiums.



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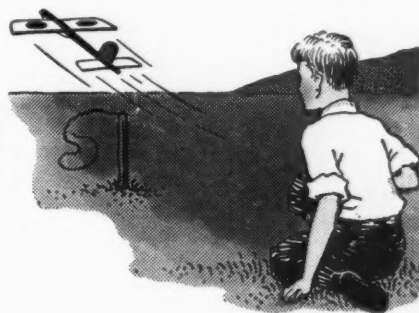
THESE nine books meet a wide variety of reading tastes, yet every one of them is a splendid title. Several have been dramatized recently before millions in motion picture theaters. "Heart Throbs" is unique as a collection of soul-stirring literary gems.

Sorrell and Son — Deeping
Ancient Highway — Curwood
Heart Throbs
John of Oregon — Poling

Valley of the Giants — Kyne
Ben-Hur — Wallace
Michael Strogoff — Verne
Touchdown! — Sherman
Uncle Tom's Cabin — Stowe

THE YOUTH'S COMPANION

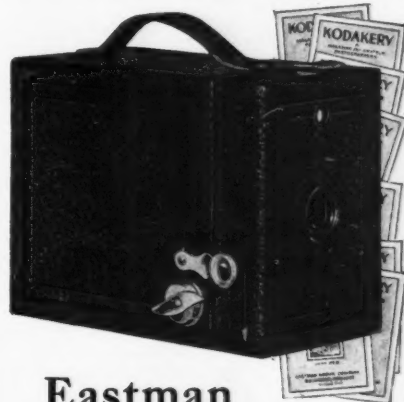
Concord, N. H., or 8 Arlington Street, Boston, Mass.



Airplane Glider

TWO Broadfield Airplane Gliders given, DURING AUGUST ONLY, for securing one new 6-months' subscription at \$1.00, and only 10 cents extra.

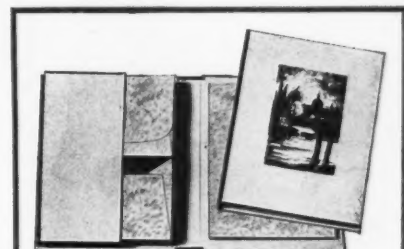
THIS glider travels "head-on," like a real airplane! Very easily assembled, and may be adjusted to secure circular flights, etc. Set includes long rubber launching band with stick to be held or driven in ground. Simply hook glider to band, stretch 8 or 10 feet, and release against wind. Our offer includes two gliders.



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Eastman Hawkeye Camera given, DURING AUGUST ONLY, for securing one new 6-months' subscription at \$1.00, and only 40 cents extra.

MAKE snapshots you will want to keep all your life. It's easy with this camera, because it requires no focusing or estimating of distance. Has carefully tested lens and reliable shutter, always ready. Eastman made, and uses Eastman N-C film. Takes pictures 2 1/4 x 3 1/4 inches. Complete instructions included. A coupon entitling receiver to one year's subscription to Kodakery Magazine also included.



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A VERY practical portfolio, hand bound stiffly, as is a book, with a genuine copper-plate etching on cover. Contains 24 double sheets of mottled parchment type paper, delicately tinted, and padded in block form with protecting blotter; also 24 attractive envelopes lined with green and gold art tissue. Exceptionally handy for the vacationist or traveler.

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STANDARD
Suits most writers.
A splendid correspondence point.
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Purple

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Writes without
pressure. Makes a
thin, clear line and
small figures with
unerring accuracy.
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countants.



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As resilient as a
watch-spring.
Fine, tapered point;
ground fine to
shade at any angle.
Loved by stenog-
raphers.



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BLUNT
An improved stub
point. This point
makes a broad line.
May be held in any
position. Liked by
rapid writers.



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A different pen
point. The tip is
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